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PRACTICAL OBSERVATIONS

ON

STRICTURES

OF THE

URETHRA,

With Cases illustrative of the comparative Merits of the  
Caustic and Common Bougie ;

ALSO,

*REMARKS ON FISTULA IN ANO,*

AND

AN IMPROVED METHOD OF TREATING

TINEA CAPITIS.

WITH ANNEXED CASES.

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BY THOMAS LUXMOORE,

SURGEON EXTRAORDINARY TO THE PRINCE OF WALES,

SURGEON TO THE EASTERN DISPENSARY,

&c. &c.

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TO ASTLEY COOPER, ESQ. F.R.S.

SURGEON TO GUY'S HOSPITAL,

&c. &c. &c.

DEAR SIR,

I feel the utmost gratification in dedicating the following pages to you, as it affords me an opportunity of publicly acknowledging your friendship on all occasions.

The world is too well acquainted with those talents which so eminently distinguish you as a surgeon, to require any panegyric. That you may long continue to ornament the profession, and benefit society, is the wish of

Dear Sir,

Your obliged humble Servant,

T. LUXMOORE.

*St. Mary Axe, August 31, 1809.*

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## INTRODUCTION.

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DISEASES of the urethra and bladder, form one of the most important objects of Surgery. They are highly alarming and painful to the patient, and require the utmost skill and experience in the practitioner to afford relief. Of late years, many volumes have been produced on this interesting subject. The treatment of these complaints was, for a length of time, one of the chief opprobria of the profession. Modern Surgery, has, however, in a great degree, removed this, although not so completely as could be wished;

and the following observations, are intended to point out some defects in this branch of the healing art ; and to demonstrate, by a detail of actual cases, how far a successful application may be made of the means commonly employed ; conclusions deduced from facts, being more satisfactory than any fanciful hypothesis.

Mr. Home has written well on this subject ; but his respect for Mr. Hunter may perhaps have biassed his better judgment in favour of a practice, on which he himself has made great improvement ; though it ought not to be adopted without much discrimination. The other writers on this disease, since Mr. Home's



publication, are numerous; but their works contain so little new matter, that it would be unnecessary to enter into a review of them. Numerous treatises on any science, are proofs of the unsettled state of its principles; and the profession, as well as the public at large, is generally benefited by every new disquisition, which seldom fails to add something to the mass of information already acquired.

Although it be universally admitted that bougies are indispensable for the cure of strictures, still, the application of these instruments does not seem to have been clearly pointed out, nor their principles of action sufficiently under-

stood. The following observations are therefore offered to the public, as the result of much experience.

The advantages afforded to the author, in the public institution committed to his charge, have furnished ample opportunities of treating the complaint which is the subject of the present publication, in every form and variety, and according to the various modes recommended; nor have his opportunities of observation in private practice been confined: the chief object of these remarks is to limit the use of caustic bougies.

Mr Home has, it is true, in



his judicious publication, pointed out the cases to which caustic chiefly applies ; but in doing so, it was evidently not his intention to recommend its application so indiscriminately as it is commonly employed ; for every surgeon of experience knows, that not one case in ten requires its application ; and that the generality of practitioners, not perhaps reflecting sufficiently on the rules which Mr. Home has laid down, are apt to employ a remedy which, in unskilful hands, is attended with the most dangerous consequences.



A  
TREATISE  
ON  
STRICTURES.

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CHAPTER I.

IN order that the peculiar mode of practice which I have adopted in the treatment of stricture may be clearly understood, it will be proper to enter into a short review of the formation of the urethra. In so doing, it will not be necessary to examine it with minuteness, as every anatomical author is sufficiently copious on this subject, but merely to point out the leading circumstances in its natural structure, by which a correct idea may be formed of it in a diseased state.



*Structure of Urethra.*

The urethra is a membranous canal, the extent of which from the orifice to the neck of the bladder has been estimated, according to the most accurate measurements taken by anatomists, to be between eight and nine inches. The surface of this canal, is the part which is the seat of the disease; and accordingly requires the careful attention of the surgeon. It is a continuation of the mucous membrane of the bladder, and furnishes a copious secreting surface, liable to constant irritation from the office it is destined to perform; it may be considered as a glandular apparatus, pouring out, by means of its excretory ducts, a secretion, mucilaginous in its nature, intended for a certain purpose in the animal economy. This peculiar organization, under the action of a morbid cause, has its natural secretion much altered; and the connection of the urethra with the bladder is such, that the latter frequently becomes more or less a partaker in every morbid state of the

former, and the former again is equally affected by changes taking place in the latter. Besides its secreting power, this membrane is capable, by means of muscles exterior to it, of contraction and dilatation. This contraction is much increased under inflammation of its surface, as from gonorrhœa, stimulating injections, or any other exciting cause. It can hardly however be conceived, that the parts themselves, as some have imagined, can have such discrimination as to accommodate themselves to the particular irritating cause applied; though this has been contended for by Mr. Home,\* who is of opinion that this membrane has the power of self-adaptation to the emissions of urine and semen; that in the former it dilates, and in the latter contracts.

The urethra may be divided into three parts: the first commencing at the neck of the bladder, and running, behind the symphysis pubis, through the

\* See Home, Vol. I. page 15.

prostate gland, terminates with it. The second division is called membranous, and extending from the prostate, runs immediately under the symphysis pubis, and is terminated at the anterior part by the bulb. The latter is therefore situated a little below the anterior part of the symphysis pubis. The third division, or spongy part, comprehends the remaining portion, which extends, from the bulb, to the extremity of the glans penis. By this division, the seat of the disease can be more accurately described and understood. In examining the canal, we find, in the natural state, three parts of it more dilated than the rest; one of these is situated at the prostate gland, the second in the bulb, and the third about the beginning of the glans. With these dilatations, it also possesses the same number of slight contractions; the first is at its origin from the bladder; the second, at the membranous part; and the third, at the point of the glans. This subject, of the diameter of the urethra, has been very accurately elucidated by Mr.



Home; and from the measurements he has made, the description now given is fully confirmed. But to make this perfectly understood, we shall here insert Mr. Home's table of the diameter of the casts of the urethra in different parts.\*

	<i>Years old.</i>	
	80	30
At $\frac{3}{4}$ inch from the external orifice .....	$\frac{9}{20}$	$\frac{7}{20} \frac{1}{2}$
At $4\frac{1}{2}$ inches from ditto .....	$\frac{7}{20}$	$\frac{7}{20}$
At the bulb of the urethra 7 inches from the orifice	$\frac{12}{20}$	$\frac{12}{20}$
In the membranous part, just beyond the bulb,		
seven inches and a half from the orifice .....	$\frac{7}{20}$	$\frac{4}{20}$
In the membranous part, near the prostate, eight		
inches and a quarter from the orifice .....	$\frac{9}{20}$	$\frac{7}{20}$
At the termination of the membranous part, and		
beginning of the prostate, eight inches and a		
half from the orifice .....	$\frac{7}{20}$	$\frac{6}{20}$
In the middle space of the prostate, $8\frac{3}{4}$ inches		
from the orifice .....	$\frac{11}{20}$	$\frac{10}{20}$
At the neck of the bladder, nine inches from		
the orifice .....	$\frac{9}{20}$	$\frac{8}{20}$

Having thus described the principal parts of the canal, it is to be observed, that strictures occur most frequently in those parts of the urethra that are smallest, particularly in the membranous part, or about seven inches from the ori-

\* See Home, Vol. I. page 25.

fice; and the natural contraction that takes place here, may be considered as constantly laying a foundation for the disease. This part, even in a healthy state, is highly irritable; and, in cases of spasm of the urethra, the chief obstruction is generally found here: hence the attention of the surgeon should be directed more to this part, than to any other. What has here been said on the structure of the urethra will be sufficient, previous to entering upon the consideration of its diseased state in cases of stricture.

## CHAP. II.

*Origin and formation of Stricture.*

From the structure of the urethra and its contractile nature, it must be subject to alternate tension and relaxation; and this relaxation in certain parts proceeding to a morbid degree, will occasion folds to take place of the internal or mucous membrane, similar to those which we find occur in the Schneiderian membrane of the nose, and such secreting membranes on exposure to irritating causes. Where this relaxation continues, a deposition of fluids must take place; and the thinner parts of these becoming absorbed, the remainder is gradually organized, acquiring firmness by time. Strictures we therefore, find to be of two kinds; one consisting in a circular contraction of the canal, the other in a mere thickening or enlargement at one or more



points ; the former extending in circumference, the latter in length.

From this view, relaxation may be generally considered as the proximate cause of stricture, produced by previous excitement from a variety of sources, and not limited, as some have imagined, to the previous effects of syphilitic irritation. Hence, it is known to arise from excess of venery itself, independent of any specific irritation ; for from the high degree of stimulus which attends the venereal intercourse, and its frequency, the quantity of blood sent to the urethra is increased ; the corpus spongiosum is kept too often and too actively distended, and the consequence of this excitement must be, in time, a corresponding inability of the parts to perform their necessary offices. In this state, some part of the membrane more relaxed than another, is liable to fall into one or more folds, the diameters of the vessels in the surrounding loose cellular membrane exterior to the urethra, become thus con-

tinually distended more than usual, and the cells are broken down; a deposition of coagulable lymph is gradually taking place, by the organized state of which a stricture ensues, the origin of which is not in the urethra itself, but in the cellular membrane. In this way, circular stricture, or that which occupies the circumference of the urethra is often to be accounted for, which may be considered as embracing the canal in the manner of a ligature. On the same principle, may be explained the stricture that succeeds violent inflammation in gonorrhœa, especially from the long continuance of chordee. The same effect will follow a practice, generally recommended to patients in the use of injections, of confining the urethra at a certain height, to prevent the injection passing further. It has by some authors been doubted, whether stricture be ever produced by the use of astringent injections. It has even been disputed by Mr. Hunter, but it is clear that the frequent use of an irritating fluid to the urethra,

by increasing the state of inflammation in a part more irritable than the rest of the canal, will occasion coagulable lymph to be deposited, which if not again absorbed, must frequently lay the foundation of stricture.

Of the causes of stricture, perhaps no one is more frequent than an excessive prolongation of venereal intercourse. The constant effect of this must be, to exhaust the energy of the muscular fibres, to throw them into irregular action, and thus to produce permanent contraction of the passage in one part or another. Indeed, so strong is its effect, that symptoms of spasmodic stricture have been known to arise in some patients after every repetition of venereal intercourse in an immoderate degree, and tho' these symptoms, at first, were found on examination not to be the effect of permanent stricture, yet this was generally produced in the end, and of the most troublesome kind to remove. In such cases also, it is to be remarked, that the symptoms of



irritation, are more extended than in common stricture. Besides the difficulty, heat, and pain in voiding urine, there generally prevails a constant propensity to discharge it; as it frequently cannot be retained more than a quarter or half an hour, so that the bladder partakes in the most sensible manner of the state of the urethra. This irritability of the bladder affects extensively the neighbouring parts; and pains in the groins extending down the thighs and legs, are common attendants on this species of the disease.

But though relaxation is the foundation of most permanent strictures, yet, the other species which is more extensive, and which, from its running down the canal may be termed the elongated stricture, is not formed in the same manner. This proceeds from a real thickening of the mucous membrane of the urethra itself: all increased action upon an irritable, sensible, and highly vascular membrane, if long and frequently continued, produces a thickening of it from

its increased circulation; hence gonorrhœa, stimulating injections, and every other exciting cause, evidently lay a foundation for this species of stricture. This cause is increased by the sympathetic irritation of the bladder, which on any morbid excitement in the urethra, is thrown into increased action to remove the irritating cause, which is again opposed by the urethra itself, and thus the excitement of the canal is increased. In the same way we find in the stone, or any other morbid cause existing in the bladder, that the urethra is excited in a similar manner, to sympathize in its state; and hence the well known pain at the orifice of the urethra, which attends all cases of calculi. The elongated stricture is always the most extensive, and that which, from the greater change of organization, requires the longest time to remove.

The above are the only two species of stricture that deserve the name of permanent. What is termed the spasmodic,

we consider merely as an occasional symptom, and one which occurs often through the whole extent of the urethra ; being produced by too violent excitement of the muscles connected with the bladder. On this kind it will be unnecessary to enlarge, as it is generally of a temporary nature, and does not require the same mode of treatment. But in cases of permanent stricture, which are often complicated with spasm, surgeons should caution their patients against taking too long journeys on horseback, especially in winter ; for though a cure of permanent stricture may have taken place, spasm, in such patients, is very apt to arise on the slightest irritation : and it is remarked by Mr. Hunter, whose opportunities of investigation were certainly very extensive, that he has known many patients who had laboured under such complaints, and were then well, to be taken ill in the middle of a journey, and obliged to stop for days on the road, continuing in great pain the remainder of the time they were from



home, and, on arriving at their place of destination, they have been confined for months.\* Another caution in these cases where the urethra is subject to such spasmodic affections is, that the urine should never be long retained at a time. As soon as the smallest inclination is felt, it should be voided ; for the stimulus of this fluid alone is sufficient to induce spasm ; and if the bladder be much distended, its powers will not be sufficient to overcome this ; while a partial distention of it, by allowing the muscular fibres to act with more energy, will more easily overcome any resistance.

It may be proper to notice here, that the bulb of the urethra itself is often thickened, and produces, in that case, the same effect as if stricture actually existed : hence it forms a peculiar species, of which surgeons should be aware in their examination, though the means

\* See Hunter, page 168.

of relief do not differ from those proposed for the other kinds.

A peculiar kind of stricture has been mentioned by one author, brought on merely by the contact of the sides of the urethra when in an inflamed state. This cohesion, when of long standing, is more obstinate than the common stricture. As the surface of the urethra is here in a highly inflamed state, the treatment is attended with considerable nicety. The stricture being so irritable, the smallest touch of a bougie gives most exquisite pain; and it is only by gradual and gentle attempts, that a passage can at last be formed, joining with these every means of subduing inflammation, by the strictest antiphlogistic plan.

Though the cause of stricture is not so often to be ascribed to venereal intercourse, yet, where it occurs in the lower parts of the urethra, it may frequently owe its origin to this cause; the evi-

dence of which may be deduced from the feelings of the patient, a short time after having had a venereal complaint. Most strictures, however, are evidently connected with chronic causes ; hence their progress is so slow, that they insidiously creep on before the patient is aware of their existence.

Authors have been somewhat divided in their ideas of stricture, whether to consider it merely a hardened state of the urethra, or combined with a thickening and alteration of its structure. The proof of the latter, they have generally drawn from the effusion of blood which commonly attends the introduction of the bougie : and there can be no doubt but that these two states are commonly combined, and that no hardening can take place without being conjoined with an alteration of structure.



## CHAP. III.

*Symptoms of Stricture.*

THE first symptoms of stricture generally pass unnoticed : the patient, although the stream of urine may be somewhat diminished, feels no particular uneasiness, and till some difficulty is experienced in its expulsion, he seldom takes any alarm. Besides, the progress of the complaint in its early stage is generally slow ; but from the time the patient begins to feel uneasiness, the advances become more rapid, and the disease is more distinctly marked.

The first symptom, besides difficulty in voiding urine, is a more frequent desire to discharge it ; the effort is greater than usual, and a straining continues, even after the bladder is emptied. Oc-

casional irregularities from cold, indulgence in drink, change of weather, and even very trifling causes, are sufficient to cause the urine to pass only by drops, or to be totally obstructed for a time. This is generally the first time that application is made to the surgeon; and unless attention be paid to examine the state of the passage, he is apt to consider it rather as an occasional attack of incontinence of urine, than as a permanent disease. This can only be decided by the introduction of an instrument, which will ascertain whether a fixed obstruction exist.

The most certain symptom of this complaint, when an examination does not take place, is the gradual diminution of the stream of urine. In many cases it is found to pass in a forked or twisted direction, and cannot be thrown to the usual and natural distance, although the patient is sensible of the bladder making more than usual exertions during the discharge. Where no examination takes

place, in order to judge of the manner in which the urine is discharged, the patient should be desired to make water; and from the appearance of the slenderness of the stream, some opinion may be formed of the extent of the disease. Even the thread-like stream, conspicuous in the advanced stage of stricture, often gives place to a discharge by mere drops, attended with the strongest efforts, and the most excruciating pain.

Not only is the progress of the disease to be judged of from the appearance of the urinary evacuation, but also something of the nature and extent of the stricture may be ascertained in the same way. Hence, practitioners have been led to apply the size of the first bougie in correspondence to what appeared to be the size of the stream of urine. But in this they are frequently deceived: for in many instances where it is supposed, from the apparent size of the flow of urine, that a middle-sized bougie will pass through the stricture,



it is found, on trial, that one of a smaller size can scarcely be introduced. Hence it has been suggested, as a point of much importance, to ascertain on what side of the urethra the aperture of the stricture is situated. It will therefore be necessary frequently to withdraw the bougie, and try it in different directions, before this point can be determined.

The effects of this complaint on the neighbouring parts, independently of the above symptoms, tend also to indicate its presence. Thus, in many cases, shooting pains are occasionally felt in the perinæum, extending to the thighs, or rectum; or a general tenderness and uneasiness in the perinæum, is complained of. A scalding sensation in perinæo is also frequently experienced at the time of making water, or else a similar feeling in the glans penis. Chordee is sometimes a symptom. A gleety discharge also attends this affection, which is often mistaken for gonorrhœa. One very common symptom is nocturnal

emissions, and this has been frequently the only circumstance which has led to the detection of the disease. This symptom is generally considered by patients themselves as unconnected with such a cause as stricture; and is generally ascribed, from popular prejudice, to weakness, or to a fulness of the seminal vessels. Hence a treatment is often recommended under this impression, where the practitioner does not make an accurate examination, which increases the cause of the evil, and is productive of much injury to the constitution of the patient. If a person of regular habits, he is generally recommended to extend his venereal intercourse; and by attempting, in consequence of this advice, to overact his part, the irritation of the urethra becomes increased, the progress of the stricture extends, and the nocturnal emissions are more distressing.

Besides these symptoms in the part, the constitution at large suffers from sympathy. An irregular attack of fever

frequently takes place, resembling the fit of an ague, in which the hot fit is proportionably shorter than the cold, though more frequently the latter is entirely wanting. The paroxysm is very irregular in its return; one repetition often succeeds another in the course of a few hours. This symptom of fever, I understand, is more frequent in the warmer climates than in this country, and is often produced by imprudence on the part of the patient; as by excesses in eating, drinking, or exercise, acting as exciting causes of the malady.

Pains in the loins and lower part of the back are common constitutional symptoms of stricture; and these pains are chiefly felt on making any sudden exertion of the body.

Complaints of the stomach are mentioned as occasionally accompanying the disease, consisting in a want of appetite, and sickness, or that irritable and

uneasy state which occurs in many nervous patients.

From this detail of symptoms, though the disease may be suspected, no certain conclusion can be drawn of its existence but by the introduction of the catheter or bougie, which will detect the nature of the obstruction, its seat, and ultimately its extent. But though these constitutional symptoms are distressing to the patient, and shew the extent of the irritation of the urethra on the system, too great an attention is not to be paid to them, in making us suspend the treatment of the local complaint. The propriety of this is strongly evinced in a case mentioned by Mr. Home, which had been under the care of Mr. B. Bell.\*

\* Conceiving, from these constitutional symptoms, that the patient would not bear the use of the bougie or caustic, in a regular manner, so as to afford relief, he gave up the idea of the local treatment for a time. The patient, disappointed and uneasy at the continuance of his sufferings, put himself under the care of Mr. Home, who, not deterred by such



Although we have hitherto considered stricture as a local disease, yet it may occasionally be conjoined with other affections which may increase its violence, and render its effects more intolerable to the patient. Thus it is frequently attended with a diseased state of the bladder; and this is particularly evident by the quantity of viscid matter thrown out with the urine: for in a short time after the bladder becomes affected, the urine acquires a whey-like colour, arising from the mucous membrane of that organ taking on an inflammatory action, and instead of depositing its natural secretion of mucus, it now secreting pus.

Stricture may also be conjoined with calculus; and in this case, when the stricture is removed, the uneasiness of the bladder, from its more complete contraction in the discharge of urine, is

scruples, employed the bougie, by which he was perfectly cured.\*

\* See Home, Vol. II. page 4.

increased. It may likewise be connected with a diseased state of the prostate ; and independent of local affections, it may occur in patients subject to constitutional diseases, which will increase its symptoms, and augment the sufferings of the patient. This particularly takes place in gouty habits during the attack of the paroxysm, but the violence of the complaint generally subsides when this is removed. Many other complaints might be mentioned, with which this disease may be occasionally blended ; and where these complaints either produce any general irritation of the system, or particularly affect the functions of the bladder, they must render stricture more distressing for the time.

## CHAP. IV.

*Diseases resembling Stricture.*

## 1. Disease of the Prostate Gland.

IN describing the structure of the urinary canal, it was stated, that the prostate gland was situated immediately behind the symphysis pubis: and to have an accurate idea of this disease, it will be proper to consider it in three different states, under the heads of irritated, inflamed, and schirrous.

The first stage may arise without any affection of the urethra whatever, and be induced by any irritation applied in its vicinity; thus we find it produced by irritating cause, applied to the rectum, as drastric purges, ascarides, piles, stimulating enemias, &c. The prostate gland, when swelled, generally becomes

firmer in its consistence, and by this swelling, the sides of the urethra approach each other; by which the ready passage of the urine is prevented, and, in certain cases, entirely stopped.

Inflammation of the prostate is attended with danger, and, like other inflammations, requires the employment of active means.

Schirrus of the prostate is rarely the consequence of the former state, or of acute inflammation. It generally arises from chronic causes, and particularly in those habits which denote a scrophulous disposition, in which inflammation always shews itself to be of an indolent and inactive kind.

In all these cases, the diseased state of the prostate is chiefly to be known by examination *per anum*, when the enlargement will be readily discovered. The passing of a bougie down the urethra,



is by no means an accurate mode of ascertaining it, and when surgeons trust to such a mode, they are apt to be deceived. The first two states of diseased prostate may occur at any period of life ; it is the want of attention to these different states, that has caused writers generally to consider this complaint as an affection of age, and to form conclusions unfavourable to its cure. It is the last state only, where the prostate is affected with schirrus, which we are to consider of that fatal nature, which has generally been held out ; the two former states admitting of a cure, by the means usually resorted to in cases of irritability and inflammation. Corresponding to these different states, the principles of the cure must be directed.

The first state or *irritable* prostate is chiefly to be relieved by the use of opiates, applied as nearly as possible to the vicinity of the part ; as by glisters, and these to be repeated according to

the urgency of the symptoms, not less than every three or four hours. Together with this, the state of the bowels requires particular attention, and laxatives of an emollient kind are to be exhibited, as the Ol: Ricin: and some others; and to this treatment is to be joined the use of warm fomentations, so as to affect particularly the seat of the disease. By a steady perseverance in this treatment, I have found that most cases of irritable prostate very soon get well; but it is necessary, that the patient pay particular attention to avoid in future every cause of irritation, which may give rise to the complaint.

The second state, or *inflammation* of the prostate, requires the most active means that can be employed to subdue inflammation in general, because of the dangerous consequences that may arise, if allowed to pass into the secondary stage, as an abscess of the perineum may be the result, or the inflammation may extend to the bladder.

Where an inflamed prostate is discovered, leeches should first be freely applied to the perineum, joined to the warm bath, and every other part of the antiphlogistic treatment. Nothing also is more useful than the free exhibition of saline purges, and, if topical bleeding do not prove sufficient in a short time, blood may be drawn very freely from the system. The use of antimony in small doses will be proper to be conjoined with the general antiphlogistic treatment.

The third, or *schirrhous* state of the prostate, is that chiefly commented on by authors, and to which their treatment has been chiefly directed. Indeed, this state of the disease is one which unfortunately admits of little prospect of cure, and more especially as it is seldom detected till in an advanced stage. The treatment commonly employed is the same as applies to schirrous affections elsewhere. The most successful remedies in this complaint I have found to be



small doses of the Pil: Hydrar: with a small proportion of Antim: Tart: and the Sal Sodæ in a decoction of Bark. These means have been assisted by topical remedies of an active nature. Leeches, I have occasionally applied to the perinæum, and, afterwards, the application of a blister has had considerable effect. On healing up the latter, a seton may be made, and continued for a length of time, till relief be obtained. In some cases, instead of this, I vary the mode of treatment, and keep up a degree of irritation by friction with the camphorated mercurial ointment. In the earlier stages of the disease, much will be effected by this treatment, but when it is advanced, no remedy with which I am acquainted seems to have much influence from that change of texture and morbid hardness which the gland has acquired.

## 2. Irritable Bladder.

The second change for which stricture is apt to be mistaken, is an irritable



state of the bladder; and the connection between this organ and the canal of the urethra, is so intimate, that an affection of the one must naturally influence, in a considerable degree, that of the other. Thus, diseases of the urethra will derange the functions of the bladder; and affections of the bladder in the same manner, produce morbid sensations in the urethra. This, we need not attribute so much to sympathy, as to a real connection of structure between the parts. The causes from which an irritable state of the bladder may proceed, are numerous. One great cause is the existence of calculi in its cavity, and the irritation of the urethra forms one of the leading symptoms of this disease. Passing the sound here is the only criterion by which the cause can be ascertained; and the introduction of this instrument will determine, whether any obstruction exists in the urinary canal.

3. The same irritability is, at times, produced by a morbid affection of the

rectum. It is a frequent attendant on piles, in which case, the cause is obvious ; and also on ascarides in this situation ; it is proper that surgeons should be aware of these circumstances, lest they should direct their treatment for a disease which may not exist.

4. One affection, for which stricture may be mistaken, is a diseased state of the mucous or secreting membrane of the bladder. This may arise from a variety of irritating causes applied to the organ, or even to the urethra itself ; hence, it is not unfrequently an effect of gonorrhœa, where the symptoms of inflammation are severe ; and of its treatment by the use of astringent injections. This complaint I have found yield readily to the exhibition of uva ursi and cicuta with the aq. kali puri, and these means will be much assisted by the use of the warm bath. Blisters, however, from the cantharides in their composition, are inadmissible.

## CHAP. V.

*Consequences of Stricture.*

INDEPENDENTLY of the uneasy symptoms which arise from the presence of stricture, the continuance of this disease lays the foundation of other affections, as formidable as the complaint itself. This should be a strong inducement, with every person, who suspects the existence of stricture, to apply early for that relief which surgery offers ; and in order to shew the necessity of this, I shall review the secondary diseases which arise from stricture.

1. *Thickening of Bladder.*

One constant effect of permanent stricture is to thicken the coats of the bladder, and to give it greater strength and



muscular power, from the state of irritation in which it is constantly kept by the interruption of the regular discharge of its contents. This thickening, we are told by Mr. Hunter, has been, in many cases, no less than half an inch, and the fasciculi of its coats so strong, as to form ridges on the inside of its cavity. In other instances, the organ has become irregularly thickened, and while some parts were preternaturally strong, others remained in their natural state, being thin compared with the rest; so that the bladder has been known to give way, in cases where it has become distended beyond a certain extent. In all cases of permanent stricture, there must be a partial distension of the bladder; and when irritation proceeds from the fulness of it, a circumstance which is very frequent, the contraction of the organ will always be violent, in proportion to the resistance. This contraction causes the abdominal muscles, from sympathy, to assist; and yet, so great is the resistance, that these efforts



united, can seldom do more than bring off the water in very small quantities. Hence, the organ never becomes completely emptied; and that state of irritation is kept up, which is attended with the change of structure already described.

## 2. *Gleet.*

Another effect of stricture, is the appearance of gleet, or a discharge of matter from the urethra of various colours and appearances. This is a symptom which always proves highly disagreeable to those who labour under it; when long continued, it produces great relaxation; and where the patient supposes it to be of a simple nature, and applies the usual remedies, the original disease becomes aggravated, and the stricture, which is the source of the evil, is rendered more permanent and obstinate. Therefore, in all cases of gleet, it is a prudent plan to suspect stricture, and to make the examination necessary to ascertain it.

### 3. *Fistula in Perineo.*

The consequence of long continued stricture most to be dreaded, is the formation of a new passage in the urethra, above the seat of the obstruction. The urine becomes lodged in that part of the canal which is immediately behind the stricture, and consequently occasions an enlargement of it; so that, at last, part of the mucous membrane of the urethra ulcerates, and the urine becomes extravasated at every evacuation, into the loose cellular membrane of the scrotum, or contiguous parts. By this process, fistulous openings are formed in different directions, of which the most formidable is that known by the name of fistula in perineo. It often consists of different orifices, or sinuous sores, through which the urine is discharged, and it is very rarely confined to one. At every evacuation of the bladder, the patient feels most excruciating pain, from the irritation and inflammation which

it every where excites. Where these sores are of long continuance, hectic symptoms are induced, and the constitution becomes exhausted under the ravages of the local affection. The cure of the original malady will, of course, remove the secondary derangement of parts.

## CHAP. VI.

*Of Caustic Bougies in Stricture.*

Two methods at present prevail in the cure of stricture, the one by the caustic, the other by the common bougie. The former is as ancient as the time of Ambrose Paré, but was revived by the late Mr. John Hunter, with considerable improvement, by the construction of a guarded mode of applying it, and by the choice of a caustic of a fixed nature and limited operation. His first attempt was made with red precipitate, but having by this remedy merely excited inflammation, he substituted for it the lunar caustic. Mr. Hunter's attachment to this practice, led him to recommend its extensive use in strictures, which, from the other means we are possessed of, is unnecessary, nor can



indeed be executed without much distress and danger. This was observed by Mr. Home, who has, with much candour, pointed out the advantages and disadvantages which the operation of caustic entails. He has shewn, that fever and inflammation are its consequences, and often to such a degree, as to endanger the life of the patient. That the application of the caustic does not always succeed in effecting a permanent cure, and that other means must be resorted to in order to second its effects, as from the employment of the caustic, spasmodic strictures often arise and continue, so as to form a new disease. These are certainly strong objections to the general use of caustic in these cases, and when admitted by one who has had extensive opportunities of forming a correct judgment, they are unanswerable. I do not however mean to say, that the application of caustic is always unavoidable, and that strictures occur under particular circumstances, which defy the success of any other means. Hap-

pily, however, these cases are but few, and only form exceptions to a general rule. Where they arise, Mr. Home's method is certainly preferable to all others, as his instrument is improved, as far as possible, for the precise local application. The caustic he employs, is of a firm concentrated nature, with but little tendency to diffuse itself.

Conceiving that the injurious effects of caustic, arise from the nature of the matter used, rather than the principle of the cure, Mr. Whately imagined that he had made considerable improvement in the treatment of stricture, by substituting the kali purum for the lunar caustic. This alteration, as an improvement, we consider to be neither sanctioned by reason, nor confirmed by experience. The kali purum is a caustic of a diffusible nature; it cannot be circumscribed as the others, and consequently its action will be extended far beyond the seat of the dis-

ease. Being so easily combined with the mucus of the urethra, it produces much more pain than the lunar caustic, and on this account it would not be so proper a remedy.

The success of active applications, to so irritable a part as the surface of the urethra, greatly depends on confining their operation to the seat of the disease. This being the case, what must be the consequence of a caustic which diffuses itself far beyond the limits, intended by the surgeon, and which it is not in his power to controul? Violent inflammation, or sloughing will most commonly ensue; and should the caustic be successful in removing the stricture, it will thus form another disease more dangerous than the original affection. Mr. Whately has accompanied his Treatise on this subject, with a number of cases, to prove the superiority of his practice; but I do not conceive them sufficiently conclusive. In perusing his work, I should imagine every prac-



itioner would be struck with the novelty of its principles. " In every case of stricture, says he, before applying the caustic, we ought to be able to pass a bougie into the bladder, of at least a size larger than one of the finest kind. This is necessary, both to enable us to apply the caustic to the whole surface of the stricture, and likewise to put it into our power, to remove a suppression of urine, should it occur during the use of the caustic. In the greater number of all the cases of stricture, we meet with, a bougie, above the smallest size, may be passed into the bladder. These, therefore, are proper cases for the use of caustic, provided none of the above objections to its immediate application exists. If the patient bear the application of the bougie, without experiencing pain, faintness, or great dejection of spirits from its action, the use of caustic may commence immediately. It should, however, be here observed, that many patients very much dread the first introduction of a



bougie.”\* I cannot conceive what necessity can exist for the application of a caustic remedy, when a bougie, however small, can be introduced into the bladder; for if any instrument can be admitted through the strictured part, the urethra will be kept on the stretch, and this, together with the stimulus it produces, will be sufficient to excite the absorbents to remove the stricture. Mr. Whately proceeds evidently on the principle, that the morbid change of stricture is incapable of being removed in this way, but must be destroyed. Such a practice militates against the opinions of the most respectable practitioners, for it is laid down as a general maxim, that it is in those cases only where no advantage is gained by the use of a bougie for a length of time, that the application of the caustic is admissible. Where a bougie can pass, it is clear no suppression of urine, except from spasm, can oc-

\* See Whately, p. 26.

cur, and therefore the very reason for preferring this remedy is entirely done away. Nay, Mr. Whately cannot avoid making an eulogium in favour of the bougie, however enthusiastic for his caustic. He says, "Is it not absurd to reject the use of an instrument which, operating as a wedge, attempts but little at a time, and this when cautiously applied, in the most gentle manner?"\*

We have omitted, in our objections to the caustic, the danger of hemorrhage, which in a great degree is apt to attend its application. This is the more serious, as many patients in the worst stages of stricture, have their health so much impaired by the long continuance of the malady, as to be unable to bear this evacuation in any great degree. Even by writers in favour of the caustic, it is admitted, that effusions of blood have taken place to that extent

\* See Whately, p. 37.

after the use of the remedy, as to fill a chamber-pot. What must be the consequence to many patients, should such a circumstance attend each application? and it has been stated by one of these gentlemen, that he found it necessary to apply the caustic, no less than a hundred times.\* Such an accident must be particularly distressing both to the patient and surgeon. If this, therefore, were the only objection to the use of caustic, it would be sufficient to condemn its indiscriminate use.

The same subject, “on the use of caustic in stricture,” has been lately prosecuted by Mr. Andrews; but his work adds little to the information given by Mr. Home. Even where the caustic is employed with apparent success, a recurrence of the disease frequently takes place, at longer or shorter intervals subsequent to the supposed cure, and such a

\* See Home on Stricture, p. 101.

one as is generally of a more aggravated nature than the primary affection. Indeed, wherever a part is destroyed to any extent, the healing of the remaining surface in the urethra, will produce a contraction of the diameter of the canal.



## CHAP. VII.

*Of the Common Bougie.*

I now proceed to the consideration of the cure of stricture by a milder mode, the mechanical operation of the common bougie; and it is to point out what I conceive to be the faults committed in the use of this instrument, that has induced me to offer the following remarks to the consideration of the public.

The bougie is a mechanical instrument formed to distend the passage of the urethra, and to act somewhat like a wedge upon it, though not entirely; for in the form of a wedge, the point being introduced, the rest of the substance, as more thickened, does not make progress, and thus its operation is arrested. It should therefore be formed

of an equal thickness throughout, so that the point being introduced, the progress of the remainder may be certain, and with this idea of the proper mode of constructing the instrument, we shall examine the forms of the different bougies in use, and afterwards their mode of application.

Bougies, are of various kinds, according to the materials of which they are composed: but those which are principally in use, are formed either of plaster or metal. The plaster bougie was first employed, and acquired much celebrity in the hands of a French surgeon, Daran. Actuated by his own interest, Daran attributed the cure to the composition of his bougie, which was due only to its mechanical principle. Hence, he endeavoured to preserve his composition a secret, and asserted that its action depended on its medical powers. This imposition was very fully exposed by Mr. Sharpe, in his "Critical Enquiry," who ascertained the true

principle of its operation : but he in so doing, unfortunately fell into a similar prejudice, by advising the introduction of mercury into the composition of the bougie. The composition of Daran, though known and published after his death, is pretended to be possessed only by Dufour, and the medicated bougie is accordingly held up by this person as necessary to a cure in every case of stricture. The proofs these authors adduce in favour of the medicated action of their bougies, viz. a discharge from the urethra attending their use, occurs under the operation of every bougie ; being the effect of irritation ; and therefore it affords no conclusion in their favour, as shewing the possession of specific powers.

An improvement on Daran's bougie was, some years since, attempted by a Frenchman named Lallier. Conceiving that Daran's bougie was formed of too irritating materials, he endeavoured to form one of a medicated quality, by in-

roducing soothing anodyne articles ; and this secret is held out in some late publications. All such compositions, I consider rather as deceptions, to impose on popular credulity, than that their authors had any conviction of their superior utility.

The metallic bougie, is a modern invention, and has the recommendation of many eminent surgeons ; but after repeated trials, I cannot but object to it, for several reasons. It is not so easily introduced as the plaister one, not taking so readily the curvature of the urethra, and giving more pain. The hollow metallic bougie, is, however, a very good instrument in particular cases. Having made these cursory remarks, I shall now offer my own opinion on the bougie, and endeavour to shew, that it is more from the improper manner of using it, than from the imperfections of the instrument itself, that it proves, at times, unsuccessful. This I can say with confi-



dence, from much experience on the subject.

The bougie, to which I give the preference, is the plaister one\*. It possesses all the advantages, in point of smoothness of surface, and capability of pressure, that attend the metallic one, without any of its inconveniences; and if the materials, of which it is formed, be thoroughly intermixed, no part will be left in the urethra to excite irritation. This is an objection which has been insisted on by those who are partial to the metallic bougie; but it can happen only when it is badly made, and attention is not paid to the fineness of the articles, which enter into its composition.

\* Those made by Mr. Guthery, of Lower James-street, are as good as any.

## CHAP. VIII.

*Application of Bougies.*

IN attempting the cure of stricture, we should, in the first instance, endeavour to ascertain in what part of the urethra it exists; and this, sometimes, might be effected by the introduction of a very soft plaister bougie, by which a model of the stricture, or its aperture, will be frequently formed. If this can be done, by introducing a stiffer bougie into the opening, so large as to enter it with difficulty, we may generally effect a cure, by gradually increasing the size of the instrument; thus, by keeping the strictured part distended, absorption will be excited, and the disease be gradually removed. But it unfortunately happens, that the aperture of the stricture is frequently not to be ascertained. It there-

fore will be difficult to say, whether it be placed in the upper, under, or central part of the urethra; having therefore no guide to direct us, it would be in vain, by this mode, to attempt a cure. It is, under such circumstances, that I am desirous to point out another mode of applying the bougie, on which alone I conceive the success of the cure often depends. It is from experience only that we can decide on the proper mode of treating a disease; and it is only by comparing a number of cases together, with the success attendant on each, that we are enabled to determine which is the most rational method, the obstacles it presents to the remedies employed, and its ultimate issue. Though I have stated the action of the bougie to be mechanical, still we ought to consider that the parts on which it is to operate, are of a very different nature; endued with a high degree of organization, possessing much sensibility, and connected with an extensive system of action, which is easily deranged by any improper conduct

in respect to its treatment. To these circumstances sufficient attention does not seem to have been paid, either in taking advantage of the co-operation of the living powers with the mechanical efforts, or in conducting the mechanical efforts to avoid injuring the living powers. The idea taken up by most authors on the subject is, that there is nothing more necessary to the cure than to apply a stretching power to the parts, and that the urethra, like any other dilatible substance, requires only to be distended; not considering that the living fibre will resume its former state, when the extraneous body is removed; and, that unless the living powers be stimulated, so as to produce absorption of the morbid part, dilatation can produce only a temporary relief, but not prove the means of a permanent cure.

The first error into which surgeons have generally fallen, in the use of the bougie, is selecting one of too small a size. This is the practice of



some of the most eminent of the profession; the maxim laid down by them is, that the cure cannot commence with too small a bougie. Hence they assert, that where a bougie of the smallest size cannot be passed, an opening may be procured by a small steel or silver wire, which, on entering the stricture, will allow the bougie to follow. To this practice however there are various objections. Too small a bougie seldom fails to irritate the urethra, and to produce spasm; thus adding a new disease to the original affection, and rendering the obstacles to the cure more numerous. Besides, a small bougie, in the progress of its passage, must necessarily wound, as its point will entangle itself, as it proceeds, in some of the small openings or lacunæ, with which the interior surface of the urethra is every where lined, and whose orifices point towards the glans penis. Besides which, such a bougie cannot give a degree of pressure sufficient to have any material influence on the obstructing cause.

The next circumstance that claims attention, is its use. For the reasons I have stated above, it has been my uniform practice, in all strictures, to begin with a bougie of a moderate size, or one so large as to make a sufficient impression upon the urethra to a certain extent. To judge of the propriety of this plan, we have only to consider the causes of stricture, or the change of organization which takes place in the passage, and occasions the disease.

The most frequent cause of this affection, I have already stated to be a previous attack of gonorrhœal, or other inflammation, which, when it produces great excitement in the urethra, occasions an effusion of coagulable lymph, which is deposited in the cellular membrane, in the manner stated in Chap. II. But this substance does not become so firmly organized as other parts of the living solid; hence it yields more readily to pressure, and consequently is more easily acted upon by the absorbent vessels.

But if a bougie be used in such a manner, as to excite too great a degree of inflammation in the urethra, the very cause of the malady is renewed, fresh depositions of coagulable lymph ensue, and the disease does not yield, as it otherwise would, to the management of the surgeon. It is obvious, therefore, that we should never attempt to pass the instrument too far at once, nor use violence in penetrating the stricture. The bougie should never be carried further than the feelings of the patient will admit, nor should we persist in passing it when resistance is firmly opposed to its passage; as suddenly overcoming the obstruction may injure the sides of the urethra. Instead of accelerating the cure, such a practice will evidently retard it, and occasion much mischief. This plan, we understand, was followed by the late Mr. Cruickshanks, who, in all cases, attempted to force a passage through the stricture, and employed the bougie on this principle. This method we conceive to be even more

dangerous than the use of the caustic; for, by lacerating the delicate mucous membrane of the urethra, a considerable hemorrhage generally followed, high inflammation was excited, and a foundation laid for ulceration, and its evil consequences. Hence, our proceedings should be so cautiously conducted, that a bougie, once passed, should be continued for no greater length of time in the urethra, than the patient can easily bear; for it is the great fault of those who are engaged in the treatment of these affections, that when a bougie is once lodged in the urethra, they are of opinion that it cannot be too long retained; not considering, that the introduction of a foreign stimulus too long continued, or too often repeated, must, in a certain degree, excite morbid as well as healthy actions; and, if the former prevail, which will be the case should inflammation be produced, fresh coagulable lymph will be deposited, and a new organization take place. Instead then of twenty



minutes, or half an hour, (which is the usual time for each application of the bougie) I seldom continue it longer than a minute or two, at each successive introduction. Having once passed a bougie, in this slow and cautious manner, through the stricture, I seldom consider this instrument any longer necessary. I find the case more easily and successfully conducted to a termination, by means of the catheter, or sound, which I accordingly substitute, as soon as circumstances admit. The progress of this plan will be better understood by the detail of cases subjoined to these observations, than by any rules which can be laid down. But, both the success and quickness of cure, I attribute, in every instance, to the largeness of the bougie at first employed. By a large size, the stricture becomes dilated to a greater extent, and pressure is also made on the surrounding parts. By this distension, the vessels which supply the circulation of the stricture, and proceed from a circumference towards a

centre, have the flow of their contents arrested, and absorption is at the same time powerfully excited. But still the pressure which such a size produces, must not be greater than the patient can easily bear; and must be regulated in its degree by his sensations. By attending entirely to this, I regulate my practice in the use of the bougie. The urethra, in different patients, possesses different degrees of sensibility; by introducing the instrument at first, for a short period, there are few persons but can endure its application. As the sensibility of the urethra becomes lessened by its use, I gradually extend the period of each introduction, which can be done with safety, and without harassing the feelings of the patient, for whatever length of time may be required. I am not anxious to penetrate the stricture at once, for if the bougie be only partly admitted, absorption from pressure will necessarily ensue.

By the adoption of this method, one

of the most troublesome symptoms that arises, and a symptom much noticed by practitioners, is greatly avoided, viz. the occurrence of spasm in the urethra. This generally proceeds from the long continuance of the instrument in the passage, and from not gradually accustoming the part to it in the manner already pointed out, and seldom, or never, arises during the short period in which I apply the bougie in my first attempts. In irritable constitutions, this symptom is more troublesome than the disease itself, and tends to interrupt the progress of the surgeon in his attempts to cure; it is also more apt to arise from the use of a small, than of a large instrument, which is another argument in favour of the plan suggested. One bad effect that attends the occurrence of spasm in the urethra, is, that the disease, when once begun, is liable to continue from habit; and the patient having experienced much pain in the introduction of a bougie, according to the usual method, has the same sensations

every time the attempt is made. From this circumstance the cure is protracted, and a new sort of malady is opposed to the efforts of the surgeon, in his attempts to relieve. I have found it useful, in the first stage of the cure, after having got through the stricture, occasionally to introduce in the evening a catgut bougie, which is to remain in the passage some part of the night. From its structure, the heat and moisture of the part causes it to swell, thus gaining considerably in the progress of the cure, and requiring the other bougie to be less frequently employed.

From this view, the principles on which I proceed are as follow ;

1. That in every case of stricture, the dilatation made should be extensive.
2. That the dilatation should not, at any time, be carried further than the feelings of the patient will allow.



3. That the continuance of the dilatation, at each application, should be short; not exceeding, at most, a minute or two, till the urethra becomes accustomed to the use of the instrument.

4. That the stricture being once passed by the bougie, the catheter or sound should be substituted to complete the cure, as instruments which admit of a more equal pressure.

But the application of the bougie, though the principal object, is not the only one which is necessary to be attended to, in conducting the cure of stricture. The patient's constitution must be considered as prone to inflammation, or otherwise; and thus liable to increase the symptoms of the affection that occupies the urethra: for, besides that inflammation increases the action of the parts connected with the stricture, the stricture itself, when inflamed, becomes much tighter, and of course more impervious to the passage of an

instrument. If the disease occur in a patient, where a fulness of habit prevails; where a tenseness of fibre exists, and where those other marks which indicate strong action of the system are evident, the antiphlogistic plan must be pursued to its fullest extent, as a necessary auxiliary means; for a neglect of this point has often rendered the treatment of diseases of the urethra more difficult, and been the means of producing formidable morbid symptoms in the progress of the cure, which otherwise would not have arisen. Nor is attention only necessary to the constitution in general, but also to those parts which are particularly affected by the action of the bougie. Thus all excitement in the rectum and neighbouring parts should be avoided, and every means employed to quiet and soothe the system. In plethoric habits, therefore, general bleeding should not be omitted. The bowels should be kept soluble and free, by means of saline laxatives. The skin should be kept

relaxed by a free use of antimony and opium, and wherever a fulness exists in the neighbourhood of the urethra, leeches to the perinæum will afford certain relief; these means will also be assisted by the occasional interposition of the warm bath.

In this disease, there is something peculiar which cannot be easily accounted for, and which every practitioner must have experienced; that some cases yield, with the greatest ease, to the use of the common bougie, and the cure will continue permanent; while, in other instances, it is not only difficult to obtain a temporary relief, with every care and attention in the introduction of the instrument; but even, if procured, such relief does not prove permanent, as a relapse almost immediately ensues. A moderately sized catheter will sometimes pass into the bladder, when a bougie will not penetrate the stricture; and this, I believe, depends upon one circumstance, that the curvature of the in-

strument remains stationary ; and probably, as the stricture is often situated at the under part of the urethra, the catheter slides over it.

In the preceding observations, we stated, that one species of stricture was produced by coagulable lymph organized in the cellular membrane which connects the urethra with the corpus spongiosum, tending to compress the sides of the urethra together at this part. The knowledge of this fact, leads to a practice which regards the use of external applications, as an auxiliary means of cure. Under such circumstances, I have frequently witnessed the best effects from the employment of friction in the under part of the penis and perinæum by stimulating applications ; as by the weak mercurial ointment with camphor, oil and camphor, or tartarized antimony united with the cerat: alb: These remedies seem to excite a powerful action of the absorbents, and thereby



assist the operation of the bougie, in a greater degree than might be imagined. Local bleeding also is frequently useful. To such a plan of treatment, regulated according to particular circumstances, there are few cases which will not eventually yield; but, at the same time, it cannot be denied, that many circumstances occur which prevent the disease from giving way without the aid of caustic; happily, however, these cases are comparatively few, and, when they do occur, I have stated my reasons for giving the preference to Mr. Home's practice, with the *argentum nitratum*. It cannot, however, be applied with impunity where the stricture is situated between the bladder and membranous part of the urethra; or, where it approaches very close to the neck of this organ. In applying the caustic, its success much depends on the nicety with which it is introduced; so that it may come in contact with the stricture itself, without injuring any contiguous part of the urethra,

Thus, prior to each application of the caustic, a common bougie, of as large a size as can conveniently be introduced, should be passed down to the stricture; this will dilate the urethra to such a degree, as to admit the caustic more safely to the seat of the disease. We should be particularly careful, that the caustic be well guarded on its sides, so as to be exactly in the centre of the extremity of the instrument; and, when introduced, it should not be instantaneously withdrawn, as is commonly done, but retained at the strictured part for a moderate length of time, which must be regulated by the feelings of the patient.\* If only a very slight application is made at each introduction, it will not tend to destroy, but merely to stimulate the stricture; fresh inflammation will thereby be ex-

\* N.B. Do we not stimulate the centre of an ulcer by caustic in a slight degree, when we want organization to be expedited, and do we not retain it to the ulcer for a greater length of time, when in a fungous state, when we wish absorption to be quickly excited?

cited, coagulable lymph deposited, and the stricture be increased instead of diminished. It should not be applied more than once in the course of every two or three days; and, in the intermediate time, the common bougie should be introduced, which, by its pressure on the stricture after it has been thus weakened, will, after a few attempts, frequently pass through it; by which means, much time and anxiety on the part of the patient will be undoubtedly saved.

## CHAP. IX.

I SHALL now proceed to make a few observations on a disease of the urethra connected with the prostate gland, the symptoms of which so much resemble those of stricture, as to be often mistaken for them. The affection to which I allude, has been particularly noticed and described by Mr. Abernethy,\* and seems to be caused by an irritable state of that part of the urethra, passing through the prostate. It would appear, that the circumstance of inflammation and irritation, taking place in a remote part of the urethra, frequently produces uneasy sensations here, as well as in other parts of the canal; depending on the state of spasm which these primary affections induce. It is an acquaintance with this fact, that enables us to account

\* See Abernethy, page 206.



for that permanent relief which is obtained in many cases, after passing a large bougie not more than two or three times, although the symptoms appear to denote the existence of permanent stricture, where no such complaint actually exists. Thus, it would seem, that an increased sensibility of the mucous membrane of the urethra, may occasionally take place; in the same manner as a similar affection of the membrane lining the bladder, produces the sensations occasioned by the presence of stone. The cause of this increased sensibility, however, cannot be accounted for; but it may be connected with a degree of idiosyncrasy, which is occasionally met with in the animal economy. I have, however, found it occur more particularly in persons immoderately addicted to venereal intercourse. This state of parts, though frequently existing alone, may occasionally be connected with an irritable bladder. Where this affection of the bladder has produced death, the parts, on dissection, are stated by Mr.

Abernethy, to shew very slight appearances of disease. The practical conclusions he has drawn from them, perfectly coincide with the opinion I have delivered in the former part of this work, respecting the use of the bougie, viz. that the morbid sensibility of parts will be diminished by the gradual and limited introduction of this instrument. Thus, the urethra becomes gradually reconciled to its action ; much violence is avoided, and the cure generally proceeds; though more slowly, without the occurrence of those sufferings, which so often arise when great force is employed. I cannot, however, agree with Mr. Abernethy, in the propriety of using a small bougie in the first attempts to cure the disease ; as such an instrument will not sufficiently distend the canal, but rather produce that degree of irritation, which excites muscular contraction ; thus the diameter of the urethra becomes more narrowed, the bougie impacted in it, and its progress of course arrested. On the contrary, I have uniformly found, that

one of a moderate size, by producing a greater distension of the muscular fibres connected with the urethra, obviates their disposition to contract, and leaves the canal in a dilated state. The morbid sensibility which affects more particularly that part of the urethra connected with the prostate, seems to be confined to this spot alone; for, in most cases it has no tendency to produce any morbid affection of the bladder. It may be worthy of remark, that even when accompanied with an enlarged prostate, the gland does not seem to partake of its irritability. Hence, the disease of the prostate, seems to be an original complaint, and not necessarily connected with the irritable portion of the urethra which we have remarked. But though, in the treatment of this complaint, we object to the size of the bougie, as recommended by Mr. Abernethy, we think much attention should be paid to his directions, by curving it considerably, and by keeping the point in contact with the upper surface of the urethra, as it

passes through the prostate gland. As excessive sensibility is here the great obstacle to the progress of the cure, in the use of the bougie, every means of lessening irritation by auxiliary measures should be adopted, as warm fomentations and leeches to the perinæum, together with the occasional use of the warm bath; all which, as well as every other means of lessening irritation, will prove highly serviceable.



## CHAP. X.

IN order to illustrate the practice I have proposed, I shall proceed to give a statement of cases of this disease; and thus shew the principles of cure which we recommend. Candour and impartiality should be the first objects of every practical writer; I shall therefore enumerate, in every instance, not only the favourable, but unfavourable circumstances which accompanied it; and thus enable the reader to judge, how far the plan pursued was applicable to the case.

It must be admitted, that however complete the cure of stricture may be, there is generally a tendency to a return of the disease, and too frequently surgeons are enabled to remove the complaint only for a time. This fact

should be strongly impressed on the minds of patients, that they may not omit to employ, occasionally, the same means which have given them relief, and to continue them, for the purpose of guarding against any renewed attack. Indeed the best idea we can form of the nature of stricture, is to consider it in the greater number of instances, as an affection to which every canal of the body that is covered by a secreting membrane, is more or less exposed. In some persons, the predisposition to stricture is as evident as the tendency to warts in others ; hence, it occurs, in the œsophagus, stomach, and rectum. It is, perhaps, that idiosyncrasy of constitution which favours a disposition to the return of the complaint ; and at least, in two-thirds of the cases where this disease has been removed, the stricture may, with certainty, be said to recur. To make, however, some distinction in the nature of strictures, we may observe, that, in any constitution, it may probably be

produced by the excitement of specific irritation, provided the original symptoms of morbid action, are of so high a degree, as to produce a deposition of coagulable lymph into the cellular membrane, which is not afterwards absorbed. Where, however, stricture arises without any apparent cause, or this previous specific excitement, the constitutional tendency to be strong; and, although a temporary cure be effected, a relapse of the complaint is always to be feared. It would also appear, that in certain constitutions the urethra possesses a peculiar disposition to contract; and this not in one part, but through the whole extent of the canal, in which cases, the slightest cause will be liable to produce this affection.

Wherever a patient has been cured of stricture, and its origin can be certainly referred to venereal intercourse, the greatest care must afterwards be taken on his part, to avoid further infection. If he unfortunately contract a gonorrhœa, a return of his former com-

plaints is generally the consequence; and the treatment of this new disease requires the greatest attention, in order to prevent inflammation and the occurrence of the secondary symptoms that induce stricture.

### CASE I.

In January 1798, a tradesman, whose avocations required much confinement to the house, consulted me for a continual inclination to make water. It had been coming on, in a very gradual manner, for the space of four years; and for the last six months, previous to his making application to me, he did not void it more than twice the number of times which are natural in the course of twenty-four hours. Being an intemperate man, and much addicted to punch and late hours, he was continually liable to general indisposition; but, when he became more regular for a week or fort-



night, which he occasionally did, his complaints were lessened. In consequence of being exposed to duty in a military corps, to which he belonged, on a winter's night, and standing in the sentry box for two hours, he soon afterwards found himself unwell, and took some brandy and water; but being obliged to lie on a mattrass for the remainder of the night, he found his complaints increased to a very great degree, with strong symptoms of fever. Early on the following morning, he had a continual inclination to void urine, even to the extent of five or six times in the course of every hour. His health being much impaired by his habits of life, I was obliged to regulate the antiphlogistic plan with much caution. However, by maintaining a determination to the skin, keeping the bowels open by saline purges, and employing the semicupium, the symptoms of irritation, in the course of three days, became considerably diminished. In a week, the fever had completely subsided;

but the local symptoms still continued, though in a much less degree. I then had recourse to opiates, guarding against constipation by the occasional use of the Ol. Ricin., and as a tonic gave him the Tinct. Ferr. muriat. in the proportion of 15 drops, three times a day. In about three weeks, his general health was considerably recruited; and though the strangury was not completely removed, it was very inconsiderable. In this convalescent state, however, he had recourse to his usual intemperance; and, in six weeks, applied to me again, his nights being continually disturbed by a constant inclination to void urine, unattended with pain. I then ordered him a dose of the Ol. Ricin., and, on the following day, passed down the urethra a moderate sized bougie, which at about a quarter of an inch from the glans penis, met with some resistance; but, by gentle and slow perseverance, I got through it. Much spasm took place in the urethra, during the progress of the bougie, but finding it embraced, I imme-

diately stopped my proceeding, till the spasm had become relaxed, and then carried it on by very slow degrees, till I found a permanent stricture about the membranous part of the urethra, which I could not penetrate, in consequence of the exquisite pain. I then allowed the bougie to remain pressing on the stricture, for about a minute. On withdrawing it, I found its extremity had just entered the stricture, and had made a kind of notch in it. The patient, after this, became very irritable, and the propensity to void urine was considerably increased. In this state, he was desired to sit over the steams of warm water; his bowels were opened by means of the Ol. Ricin.; and at night, an opiate was administered. We had occasion to repeat the Ol. Ricin. next morning, by which time the irritation had much subsided. I then passed the bougie down to the stricture, and kept it there longer than before. The next day, I suffered it to remain between three and four minutes, when he did not complain of

near so much pain as on the preceding applications. The subsequent day was passed more comfortably, without much irritation being produced; he again had recourse to the steam of warm water, and took an opiate at night. The following morning, I attempted to pass the same sized bougie, and kept it pressing on the stricture nearly a quarter of an hour; but it did not seem to gain much ground. The same medicines were administered on the following morning, when, by keeping the urethra on the stretch, and, by pressing the bougie on the stricture, it suddenly entered the bladder. The patient then complained of a burning sensation, and made water in a much larger stream than he had done for years before, though with excessive pain. The next day, I found some difficulty in again penetrating the same stricture; but, at last, succeeded, though the patient still complained of great pain, when the bougie entered the neck of the bladder. On the following day, he made water in a very copious stream;



though still with much pain. The same treatment was still continued ; but much tension appearing about the perinæum, leeches were applied. He was also next day briskly purged with the magnes. vitriol. and the bougie now entered rather more easily. The spasm of the urethra became greatly diminished, and the difficulty of passing the bougie was, of course, less experienced for the three following days ; at the expiration of that period, I increased the size of my bougie, but did not succeed in passing it ; accordingly, I had recourse to the former sized instrument, which entered with tolerable ease. I proceeded, on this plan, for three days longer, when tension and fulness were again perceived in the perinæum, for which leeches and brisk purges were again employed. The same sized bougie was then introduced, every other day, for four weeks, without experiencing any impediment in its passage ; and the days on which that was not introduced, a catgut one was worn at night. The first night he bore

it about three hours; on the following one, I gave him a full dose of opium, and he retained the instrument for the whole night. This plan of night and day bougies, was continued for a fortnight longer, when the patient was perfectly restored. He, however, kept bougies by him, for some time afterwards, which he occasionally passed for two or three weeks.

*Remarks.*—I have been particularly minute in the statement of the circumstances of this case, as pointing out, in a strong manner, both the most frequent cause of the complaint, and the means necessary to be employed with the bougie, in order to complete the cure. From the state of the patient's constitution, and from his habits of life, this was clearly a case of general irritation, connected with a local cause; and together, with my attempts locally, the general irritation of the system, was a chief object that engaged my attention. I therefore began my endeavours at a cure, on

a strict antiphlogistic plan, till the irritation had somewhat subsided; and, I next endeavoured to amend his general health, by the use of tonics. Having gained my point so far, by means of these preliminary steps, I examined the state of the urethra, to ascertain whether the complaint were the effect of stricture, or, merely of an irritable state of the bladder. Having ascertained that stricture was the source of the disease, I conducted my treatment according to the principles laid down in the preceding part of this work; guarding against an increase of irritation by not persevering in my efforts longer, at one time, than the patient could bear; and using every auxiliary means of lessening increased action, by the use of warm steams, by keeping the bowels open, and by administering opiates. In this way, I gradually gained on the disease, till such a relaxation of the passage took place, that the bougie almost unexpectedly entered the bladder. Having thus far succeeded, my subsequent at-

tempts were conducted with the same caution; I continued the means of lessening inflammation both by brisk purging, and the application of leeches to the perinæum: and the advantage gained by the introduction of the common bougie in the day, was increased, by the introduction of a catgut one at night; a practice that was continued from this period, till a complete cure was effected, which took place in the space of four weeks. To prevent the possibility of a relapse, the precaution was adopted of using occasionally, a bougie, for some weeks afterwards, and he has since continued free from any further attack.

## CASE II.

A gentleman, aged 42, residing at Wandsworth, in Surry, who was accustomed to a very active life, and occasionally hunted, had been subject to many claps, for which, he always used an injection of white vitriol he kept by him.



For two years before, on making water, he found it necessary to use much straining, especially after riding on horseback: this, at length, became so violent, that he could hardly void his urine at all, after using any exercise, except in divided streams, (generally two,) or in a very small stream. On his applying to me, I passed down a moderate sized bougie, and found a stricture about the bulb of the urethra, which I could not penetrate. I then tried a smaller one, and that also failed. This did not excite much irritation, and, therefore, the next day, I again passed the middle sized one, and kept it pressing on the stricture for about five minutes. It then gave him some degree of uneasiness, and I was obliged to withdraw it, in consequence of a violent inclination he felt to make water. The next day, I passed it again; and after keeping it in the passage about ten minutes, it suddenly penetrated about an inch through the stricture, and was followed by some discharge of blood; but I could not get it beyond this part.

The patient then became faint, and I was obliged to withdraw it; when he made water with a great sensation of burning. The next day, he would not permit me to introduce it, on account of soreness. The following day, I again passed the same stricture, when the bougie stopped; I next tried with a very small one, but could not find the orifice of the stricture; I repeated the attempt, on the following day, with a small bougie, but to no purpose. The next day, I introduced the middle sized one, and kept it at the stricture for nearly half an hour. By this, some degree of soreness was produced; however, I again introduced it on the following day, but gained no ground. The bougie was, in this manner, introduced every day for a week longer; when the stream of urine became much larger and less separated; but the patient complained of great irritation about the rectum. To relieve this symptom, I threw up forty drops of tinct. opii. to  $\frac{3}{4}$  ij of sweet oil, which, in the course of three hours, in

a great measure, took off the irritation. This was regularly continued every night, keeping up pressure with the bougie in the day. Great soreness was produced in the urethra at the seat of the stricture; a slight discharge of mucus took place; and I got the instrument into the bladder after a trial of three weeks. The day after, I could not pass the instrument more than four inches, which I conceived to be in consequence of spasm; for the next day it went in on using a very slight force. The patient introduced bougies almost every day for the space of two months after this period. It is now some years ago, and he has had no relapse.

*Remarks.*—The above case is chiefly to be remarked, inasmuch as the cause of stricture was evidently the use of astringent injections. It has been strongly asserted, by Mr. Hunter, that this could never occasion the disease; but so many proofs of this kind come before the surgeon, that I believe his

opinion is more ingenious than well founded. In this case, I first followed the common mode of using a small bougie, but experienced no success from this effort; on the contrary, I found the application of a middle sized one, to be the only means of gaining any ground. In my attempts here, I deviated a little from my usual plan, and employed more force in pressing against the stricture, than I have recommended. The consequence of this was that I gained ground, and passed the bougie suddenly for an inch through the stricture, but at the same time it produced such a degree of irritation, that the patient became faint. Soreness prevented my proceeding; and, on making an attempt the following day, I could not pass the stricture. These trials were repeated on the subsequent days, and it was only by regular perseverance, in pressing upon the stricture for a certain period, that I at length succeeded in procuring a passage into the bladder. This clearly shews, that the mild method of procedure is both



the safest and most successful; and that a gradual and continued pressure will overcome difficulties apparently insurmountable; for in this case it required eight weeks to procure a free passage.

### CASE III.

A butcher in Whitechapel applied to me for a running, which had continued upon him for about eighteen months, being sometimes very trifling, and at other times more copious. He was a married man, and had not been the subject of any venereal affection for the last six years of his life. His urine was passed in a dribbling manner, and when asleep, it frequently came away involuntarily, and during the day, when he wanted to make water, he felt an inclination to go to stool. I passed down a moderate sized bougie, and found a considerable contraction in the canal about four inches from the orifice; which, however, I penetrated, and proceeded till I got the instrument into the bladder. He immediately felt

this inclination to go to stool, which was so unpleasant, that I was obliged to withdraw the bougie. The following day, the discharge was considerably increased, and there was some degree of tenderness in both testicles. I then purged him briskly with the Ol. Ricin. for two days. The third day, I again introduced the same bougie into the bladder, where it remained about five minutes. The next day it was retained for three minutes longer; and, on the subsequent one, for the space of a quarter of an hour. This was continued with the same sized bougie for four days more, when he retained it, without any inclination to go to stool, or to void his urine, while the instrument remained in the passage. I then kept it in for an hour at a time; but, as he was obliged to walk much, I introduced a small catgut bougie in the evening, which was suffered to remain in the urethra till morning, and was then withdrawn. At this time a degree of hardness took place along the under part of the urethra, for

which I directed him to sit over the steams of warm water every morning, and to rub into the part a little of the weak mercurial ointment with camphor, which he did for four days: in consequence of this, the urethra became more relaxed; the urine was passed in a larger stream; and at the expiration of three weeks he was perfectly cured.

*Remarks.*—The above case is principally entitled to our attention, as shewing the extensive influence of stricture both on the urethra and bladder. In the first, it produced a disagreeable and irregular gleet, and, in the latter, was attended with an involuntary discharge of urine, and an unpleasant affection of the rectum. This latter sensation was so violent, as even to interrupt the progress of the cure; and I was obliged to attempt the removal of the irritation, by the antiphlogistic plan, previous to repeating my efforts. In this case, my proceedings were conducted in the slow and gradual manner I have recom-

mended ; what I gained in the day, was increased by the use of the catgut bougie at night. In this way, the case went on successfully ; the symptoms of hardness in the under part of the urethra, though occasionally occurring, were not necessarily connected either with the disease or mode of cure ; they probably arose from the use of the bougie, but readily yielded to the use of warm steams and friction, which means, in such cases, I have never found to fail,

#### CASE IV.

A gentleman put himself under my care, about four years since, for nocturnal emissions, under which he had laboured for some time. His stream of urine was very little altered from the natural size, but it was small ; and he had no irritation or sense of pain in voiding it. I passed with ease a bougie to about the bulb of the penis ; when by making some pressure, and holding it



there a short time, something seemed to give way, and it went about two inches further. Here, however, I was obliged to stop; but, after repeated trials, for several days, it suddenly passed into the bladder: from that time, he made water in a full stream, and the nocturnal emissions soon disappeared. He used the bougie about three times a week, on going to bed, for the space of two hours; a plan which he continued for nearly four months; keeping, at the same time, his bowels in a relaxed state, and avoiding wine. He has since, occasionally, used a bougie; but voluntarily, and not from any inconvenience he has sustained.

*Remarks.*—This case shews that most of the common symptoms of stricture may be absent, and yet the disease exist. The only symptom here that could give suspicion, was the nocturnal emissions, which is by no means a certain or constant attendant on this affection. It would also appear, that the stricture,

though not so permanent as the others I have described, not having even much influence on the stream of urine, was yet capable of producing such irritation, as powerfully to affect those parts connected with the secretion and discharge of semen; and this irritation being removed, nothing further was necessary to restore the parts to their proper tone, than to remove those deranged sensations which occasioned the involuntary discharge.

## CASE V.

I was called up, one night, by a gentleman who was seized with a total retention of urine, after riding on horseback. He told me, he had for some time suspected that he was the subject of stricture. I endeavoured to introduce a bougie, but without the least effect; it seemed only to increase his pain. I immediately bled him, till syncope was nearly induced, and then attempted

to introduce a small catheter, which, with very little difficulty, passed down to the neck of the bladder. The sphincter muscle, however, seemed to resist for about five minutes ; but, at the expiration of that time, it relaxed, and the catheter suddenly entered the bladder, when he discharged nearly a chamber-pot of urine. I left the instrument in the urethra all night ; but, the next day, he becoming rather uneasy, it was withdrawn, and he was briskly purged. On the following day, I introduced a hollow gum catheter, which was passed with a little difficulty. This was suffered to remain for two days and nights, till he made water very freely, after which it was withdrawn. He has since experienced no relapse.

*Remarks.*—This case, together with some of the former, is a proof how readily retention of urine is brought on, where there is any obstruction in the urethra, by riding on horseback. This shews how strict a caution should be



given to patients on this head. The state of the urethra here prevented, in the first instance, the introduction of a bougie; and the copious bleeding which was employed, shews the powerful effect of this remedy on the system, and also locally on the urethra. To this alone I attribute my success in passing the catheter into the bladder; and it is of the utmost importance that surgeons should be aware that antiphlogistic remedies, so far from being a secondary consideration, should, in such cases, form the leading indication; and that no local attempt should be made, till they have had their full influence, by inducing a relaxed state of the urethra and bladder, and of the muscles connected with them.

## CASE VI.

A gentleman, who had been for some years in Russia, contracted, while there, a virulent gonorrhœa, and being obliged to travel, suffered the complaint to take



its course. He informed me that the discharge left him in about the space of four months; but that he had never since been free from a cutting sensation in perineo, on making water, nor was any other particular inconvenience experienced from it, except that, after riding on horseback, he was obliged to strain violently, before he could void the smallest quantity of urine. At other times, he made water more freely; the stream being lessened, but less force was necessary in discharging it. He applied to me, about three years after these symptoms had first appeared. I told him that I suspected the presence of stricture in his urethra, and requested he would allow me to examine the part by a bougie. To this, however, he would not submit, saying, that he conceived it to be nothing more than gravel, as considerable quantities of this matter were constantly found in his chamber-pot. As he objected to my proposition, I merely kept his bowels open, and ordered him some mucilaginous medicines.

Having tried this plan, for about six weeks, without relief, he allowed me to pass down a bougie; on doing which, I found a sensation of roughness in the urethra, about the bulb. The patient scarcely complained of any pain in passing the instrument, I therefore allowed it to remain for a quarter of an hour, but found a resistance which I could not surmount. I tried bougies of a smaller size, for five successive days, still without effect. On the sixth day, I passed down a bougie, armed with the argent. nitr. and kept it in the part for nearly two minutes, the patient hardly complaining of any pain, and describing it merely as a smart. The following day I introduced a small bougie, but gained no ground. The next day, I passed the caustic; and on the subsequent one, I again introduced a bougie of rather a larger size than before, which producing no effect, the caustic was again applied. On the following day, I passed down a tolerably large gum bougie, and after keeping it in about a minute, it suddenly penetrated

an inch further, when it seemed firmly wedged ; but on taking off the patient's attention, by conversing on another subject, and making use of a slight degree of pressure, it passed with some difficulty into the bladder, when I immediately withdrew it. On the following day, the same sized bougie was again introduced ; and, as the parts seemed so insensible, I passed a small catheter into the bladder at night, at the same time giving an opiate. This was continued for three successive nights, when it seemed to produce a slight degree of irritation, and I accordingly employed some antiphlogistic means : the irritation subsided, and the catheter was introduced every other night, for the space of a fortnight, after which period the patient made water in a very free and easy manner. He remained in England for two months longer, and then departed for India. I have since heard from him, and understand that he has had no return.

*Remarks.*—This case was, evidently,



the effect of a neglected gonorrhœa. The pain was chiefly confined to the perinæum, and, like several of the former cases, was much aggravated by riding on horseback, which brought on a difficulty in the discharge of urine. Together with this sensation in perineo, according to the patient's account, there would seem to have been a discharge of mucus from the internal membrane of the bladder, which he falsely termed gravel. The principal circumstance in this case was the great insensibility of parts, during both the action of the caustic and the application of the bougie. It materially differs in this respect from the most usual cases of the disease. This insensibility was very favourable to the progress of the cure, and there was scarcely any occasion for the use of antiphlogistic remedies during the whole period. The alternation of the caustic with the bougie, certainly much expedited the cure; and, from the insensibility of the parts, it was a case well adapted to Mr. Home's plan. We therefore think, that in many



instances, as in the present, the caustic forms a valuable application ; but such a state of parts cannot be distinguished beforehand, and therefore the use of caustic must always be restricted in its application, and requires judgment in its employment to avoid the mischief which would arise from the irritable constitution of the patient.

## CASE VII.

A man applied to me, as a patient of the Eastern Dispensary, for a difficulty in making water, and so severe was his complaint, that he could scarcely make half a tea-cup full at a time. I passed a moderately sized bougie, as far as the middle of the spongy part of the urethra, where it seemed to be firmly grasped. The patient immediately complained of extreme pain, and the extremity of the bougie when withdrawn was covered with blood. On the following day, the penis was considerably swollen, and some degree of swelling ex-

tended to both testes. This, however, subsided in the course of five days. On the sixth day, he made water in a full stream, and without pain ; but would not again permit me to pass the bougie. I saw him about a month afterwards, and he was perfectly cured.

*Remarks.*—This case may be considered as a contrast to the former, in respect to the irritability of the urethra. The difficulty of voiding urine was here great and permanent. The bougie was passed into the spongy part of the urethra, with the degree of pressure usually employed ; it was here firmly grasped, and the effect of this moderate pressure was so great, as to occasion the patient to complain of extreme pain, and to cause the extremity of the bougie to be covered with blood. The irritation was indeed so considerable as to produce inflammation, and a swelling of the penis on the following day ; but the application of the bougie, though so powerful, had evidently removed the source of the evil ; for,

when the inflammation subsided by the proper use of antiphlogistic means, the patient voided his urine in a full stream, and it was not found necessary to pass the bougie a second time, nor would he consent to it, on account of the pain he had experienced.

### CASE VIII.

A gentleman put himself under my care, three years since, for a sensation of weight, as he described it, in perineo, and considerable tenesmus, with much straining on making water. On passing a bougie, such a degree of pain was produced, as to be almost insupportable. Great irritation came on the same evening about the parts, with a continual inclination to void urine. The perinæum was therefore fomented, and a large poultice applied that night: an opiate was also administered, joined with the pulv. antim.; but the irritation returned as soon as the effects of the

opiate went off. Suspecting some disease of the prostate, I requested permission to pass my finger up the rectum, and on doing so, found the prostate to be much larger than usual; and so much pain was occasioned by pressing upon it, as to be insupportable. Leeches were applied to the part, and he was put into the semicupium. A bladder of hot water was kept to the perinæum, and a dose of *Ol. Ricin.* administered, to obviate the constipation produced by opium. From the violence of the symptoms, he appeared, towards evening, much reduced in strength; on this account, I did not think it advisable to repeat the bath, but only the opiate and *pulv. antim.* On the following day he was much better, yet still had great inclination to make water, accompanied with tenesmus. He now allowed me, which he would not do before, to throw up the rectum a small quantity of oily injection with opium, by which the above symptoms became much relieved. The whole of these means, viz.



leeches, the warm bath, &c. were alternately used for about a week longer, when the tenesmus, and inclination to make water, both completely subsided. I now gave him the bark with soda, which soon recruited his strength. On making an examination *per anum* at this time, I found the prostate nearly in its natural state; he now took calom. gr. j. c<sup>m</sup> extr. cicut. gr. x. every night; and, at the expiration of six weeks from the commencement, the disease of the prostate was entirely cured, and his health re-established.

*Remarks.*—This was clearly a case of what I termed the inflamed prostate; and the extensive influence of this gland on the contiguous parts was here rendered evident by the symptoms which were produced. These were entirely confined to the perinæum and rectum, and such was the irritation that occupied the whole passage, that the slightest touch of the bougie was insupportable. This affection is easily ascertained

by examination *per anum*; and thus, wherever the symptoms are so strongly confined to the perinæum and rectum, such an examination should never be omitted. The plan of treatment in this case consisted in the employment of antiphlogistic means, directed particularly to act on the seat of the disease. The remedies which here proved most effectual, were, bleeding in perineo, and opiate glisters. The relief in those cases generally remains till the opiate has lost its effect; and on these two means the cure should chiefly depend. When the inflammatory symptoms have entirely subsided, a tonic and alterative plan may be begun; for it is surprising in how short a time active inflammation of the parts situated about the neck of the bladder debilitates the constitution, and exhausts the patient.

## CASE IX.

A man put himself under my care,

two years since, for a tumour, or enlargement of the corpora cavernosa penis, just behind the glans, for which he had consulted several surgeons, most of whom had treated it as stricture, but some did not advise the use of a bougie. Conceiving from the appearance of the corpora cavernosa that coagulable lymph had become deposited in its cells, and had formed a degree of organization, so as to compress the urethra, I determined to endeavour to excite its absorption, which I effected in about a fortnight, by means of leeches, and by friction with strong camphorated oil; so that in a month he was completely cured. As a medicine, he took very small doses of emetic tartar with calomel, which produced a trifling degree of nausea every night.

*Remarks.*—This case is an affection not often met with. That it arose from an enlargement of the corpora cavernosa, in consequence of a deposit of coagulable lymph, was evident by the success of the treatment; and to have considered

it as a case of stricture could not lead to any proper mode of cure. It also affords a proof how quickly absorption of coagulable lymph may be produced by means of alterative remedies, joined with leeches, and succeeded by the use of friction with stimulants, to remove the accumulation of the surrounding vessels.

### CASE X.

About a twelvemonth since, I was consulted for a gentleman, who, when he wanted to make water, (to use his own expression,) “felt as if his bladder were tearing to pieces,” so that without the aid of hollands and water, he could void scarcely any at a time. I tried bougies of various sizes to no purpose, a plan which was repeated for several successive days. The urethra, for some extent anterior to the bulb, felt exceedingly rough. I told him, that I feared I should be unable to be of service to him, except by the use of the caustic,



which, however, he refused to have applied. I then introduced a catheter, and retained it in the passage, without using any force to propel it forwards, which suddenly penetrated through the stricture, when a violent hemorrhage ensued. The catheter was allowed to remain in the urethra the whole night, and the patient soon recovered.

*Remarks.*—This may be considered as a cure of stricture by forcible destruction, such as Mr. Cruickshank, and some others, were accustomed to employ. That I was here sanctioned in my mode of proceeding, will be readily granted, from having first used the bougie unsuccessfully, and being afterwards prevented by the patient from applying the caustic. In introducing the catheter, it was not my intention to use much force, nor did I actually do it; but it unexpectedly penetrated through the stricture, and the violent hemorrhage which ensued, denoted the manner in which the obstacle was removed. Such cases as

this will occur to every practitioner, and could the above plan be always safely employed, it would certainly produce a more speedy cure. A practitioner, however, must be directed by the circumstances of particular cases; and, however judicious his general plan may be, he must occasionally deviate from it, rather than leave his patient to certain destruction.

## CASE XI.

A person, residing at Limehouse, had for some years been afflicted with stricture, for which he put himself under the care of a surgeon, who several times applied the kali purum. I was suddenly called to him, in consequence of an inability to void his urine; he was in great pain, the urethra had given way about the membranous part, and the urine had become extravasated into the cellular membrane of the perinæum and scrotum. I immediately made an opening through the integuments, to correspond with that

formed in the urethra, and the urine became absorbed in the course of two days, by the application of a solution of sal ammoniac and vinegar. I endeavoured to introduce bougies, but in vain; some part of the urine passed through the urethra in a very minute stream, and neither catheter nor bougie would enter for some weeks. An eminent hospital surgeon saw the patient with me, but could not succeed in passing an instrument. He therefore took him into an hospital, for the purpose of performing an operation, for being a poor man, it could not be done at his own habitation; and, on the day appointed for its performance, he thought he would once more attempt to introduce the catheter, when the trial proved successful by its unexpectedly passing into the bladder.

*Remarks.*—The above is one of those uncommon cases in which we cannot altogether account for the particular state of the stricture, and the resistance

made by it to the introduction of the bougie. That the stricture was of the most permanent kind, appeared from its having produced fistulous openings in the perinæum and scrotum. So firmly satisfied was I, together with the surgeon who also saw him, as to the impossibility of passing an instrument, that he took the patient into the hospital to have an operation performed on him. While there, anxious to make a last effort, he had recourse to the catheter; and its passage into the bladder was a matter of the utmost surprise both to himself and me.

## CASE XII.

In the beginning of last year, a gentleman of high rank, aged 44, applied to me, from having a sharp cutting pain in making water; a difficulty of retaining it for any length of time; a necessity of employing considerable force when he endeavoured to expel it; an in-



ability of ejecting it to any distance, and a sense of weight in perineo. The stream was small and rather twisted. He had found these sensations gradually coming on for a twelvemonth past. To ascertain the cause of the affection, I passed a bougie down the urethra, with great ease, till it reached the prostate gland. Much pain was experienced on its passing through the membranous part. I could not introduce it through the prostate, but, in its stead, was obliged to have recourse to a smaller sized bougie, which I passed into the bladder. With these symptoms, he also felt a sense of weight in the rectum, a circumstance which led me to examine it, and on introducing my finger, and carrying it up anteriorly, I found a considerable enlargement of the prostate, which was by no means sensible to the touch. On this discovery, I first rubbed in the mercurial ointment with camphor, and gave him calom. gr. j. cm. extr. cicut. gr. v. nocte et mane. These remedies were continued

for the space of three weeks; but he did not appear at all benefited by their use. I then blistered the perinæum, which seemed to afford temporary relief; but, as soon as this was healed, all the symptoms returned as before. Mercury was then continued only every night with calom. gr. j. and the cicuta increased to gr. x. nocte et mane, which was given without any sensible effect for a week longer. Half a grain was now added to the cicuta every day for a fortnight, and five grains continued every morning, which were gradually increased to six grains. This plan having been persevered in for six weeks, without relief, except when the blister remained open, I was led to introduce a seton in perineo, which was kept open for a fortnight; but, though it seemed for a day or two to alleviate the symptoms, its effects soon subsided. The mercurial plan having produced some degree of debility, he took the ferr. ræcip. c<sub>m</sub>. soda, went to the sea-side, and made use of the tepid sea-bath for

a month, when his general health became in consequence improved; his propensity to make water less painful and frequent; and, on the whole, he was much better, when I discontinued my attendance, than when he first applied to me.

*Remarks.*—In this case the symptoms of diseased prostate, were strongly marked; the weight in perineo, and disagreeable sensation in the rectum, may be considered, in this affection, as denoting it more certainly than in any other. The circumstances in voiding the urine are more doubtful, and will attend every case where there is an obstruction in the discharge, whether from stricture, diseased prostate, or even spasm of the passage. Having ascertained the case to be a diseased prostate, I determined to push mercury and cicuta to such a length, as to give the medicine a fair chance of success; and I am fully satisfied from this, and a number of other cases, that no advan-

tage is ever derived from this plan of treatment; but, on the contrary, that the patient becomes debilitated by its continuance, and the symptoms of irritation are increased rather than relieved. Whatever merit may be attached to cicuta alone, I have never seen it prove beneficial in the present disease; it is a remedy which is more prescribed from habit, and the authority of some great names, than from any good effects experienced from its administration. In this case, the prostate displayed little or no sensibility to the touch, when compressed; and was apparently in that confirmed scirrhus state which admits of no relief from the powers of medicine. On finding the deobstruent plan abortive, and that the constitution of the patient had suffered under its continuance, I changed the method of treatment, and gave him the steel and sal sodæ, considering that the amendment of the general habit, by giving the organ more power of action, would benefit the local affection. The



application of a blister to the perinæum, was not attended here with that alleviation of symptoms, experienced by Mr. Hunter, in some cases he describes; nor was the insertion of a seton more fortunate, for though it afforded some relief for a short time, this did not extend to weeks, as stated in the cases of some authors. Perhaps this may be attributed to the confirmed state of the scirrhus, and the same application might be successful, where the prostate was simply irritable or inflamed. The warm sea-bath was certainly useful here. On the whole the sufferings of the patient were diminished, and I have reason to infer, that the progress of the disease was somewhat suspended.

### CASE XIII.

In the beginning of last summer, a gentleman put himself under my care, for what he conceived to be stricture; for which he had been treated during

eighteen months, having had several applications of caustic made to the urethra. His health and strength were much impaired at the time I saw him, and his complaint was more aggravated than relieved. In this case, both the urethra and bladder were in a highly irritable state, attended with a discharge from the former; in consequence of which his mind was exceedingly agitated, and his bowels very irregular. His application was made from a reluctance to suffer again the pain of the caustic, which had been so severe in its effects. At this time he much wished me to introduce a bougie, to ascertain the nature of the stricture. This, I told him, would be highly improper, under existing circumstances; but that I would first endeavour to get the parts, which were labouring under much irritation, into a quiescent state. With the view of lessening his uneasiness, I attempted to persuade him that he imagined himself much worse than he really was. My first plan was to get his bowels into

a regular state by the use of calomel and rhubarb, and a small quantity of magnes. vitriol. with a solution of emetic tartar in the morning. He then went three times into the warm bath, leeches were applied to the perinæum, and he commenced regularly with the pulv. dover. at night. By these means his pain became considerably alleviated, but his urine deposited a very thick sediment. For this he next took the uva ursi three times a day, and the aq. kali puri, combined with a strong solution of gum arabic, in rather large doses. By these remedies, the bladder gradually acted less frequently, and the urine was propelled with considerable force; though I never observed from the first that the stream was either divided or twisted. This plan was continued for the space of three weeks, and he became completely cured, without once passing bougies.

*Remarks.*—This case is one which should point out to surgeons the caution which is required in deciding on

any plan of treatment, without having fully ascertained the cause of the affection. In this instance, no stricture whatever had existed; the patient had repeatedly submitted to a painful and dangerous operation, to remove a morbid state which did not exist; and in consequence of the applications which were made, his general health had considerably suffered, his mind was harassed by the idea of the danger of his situation, and the urethra and bladder rendered so irritable, as to keep him in a very painful and disagreeable state. Conceiving the general health, and morbid state of the urethra and bladder, to be the chief points requiring my attention, I immediately opened his bowels by small doses of rhubarb and calomel, joined to the magnes. vitriol. with a solution of emetic tartar; a combination whose beneficial effects have never disappointed my expectations, where a mild effect was required to be produced on the bowels, joined with a tendency to an increased discharge by the skin.



These means were assisted by the use of the warm bath, which, I conceive, in these cases, where it can be employed, to be a useful remedy. Leeches were applied to the perinæum, and small doses of the pulv. dover. given at night. The relief obtained by this plan was both speedy and great, as he made water easily, though it deposited a thick sediment. From this circumstance, conceiving that the irritation had much affected the mucous coat of the bladder, I had recourse to the uva ursi, with a strong solution of gum arabic; which I consider almost a specific remedy against this symptom. By this plan, the bladder gradually regained its functions, the urine was propelled in the usual forcible manner, and the cure completed in the space of three weeks, without passing a bougie.

## CASE XIV.

A rider to a mercantile house applied to me, in the year 1807, for what he conceived to be stone in the bladder. He had frequently been the subject of gonorrhœa, and boasted much of a secret specific injection which he employed for its cure, which was found to be, on examination, a strong solution of blue vitriol ; and he said that, by the use of this, he always accomplished a cure in the course of a few hours. The reason of his believing the complaint to be stone was, that the surgeon, under whose care he had been, had told him (to use the surgeon's own words) that he had burned through two strictures, and that the symptoms which continued, of violent straining in making water, with excessive pain, and a great length of time in voiding it, were not to be ascribed to stricture, but to the presence of stone. I desired him to make water, which was done with much difficulty, and after a great

length of time. He then requested me to pass down a sound, to ascertain whether a calculus really existed. Being a very strong man, of a full habit, and who drank freely, I immediately took away sixteen ounces of blood from his arm, and purged him briskly, by means of calomel, rhubarb, and jalap. As there was much tension in the perinæum and region of the bladder, these parts were fomented with the decoc. papav. alb. and he also sat over the steam of warm water, as the warm bath could not be conveniently obtained. Glysters of gruel and oil, were also thrown up the rectum twice a day, as a fomentation to the bladder: in the course of three days, by these means, he was considerably relieved; the stream of urine became very much increased, but, still the sense of tenderness in the perinæum remained, and the secretion of urine was very small. His tongue was furred, with a dry skin; for which symptom I thought proper to exhibit small doses of emetic tartar, so as merely to excite

nausea. The first dose that produced this effect, brought on a great discharge of urine, but as he had an aversion to keep his bed, he was allowed to remain up; in consequence of which no determination to the skin seemed to take place, nor was there any alteration in the appearance of the tongue. His skin was yellow, with a fulness of pulse; and, suspecting, from these appearances, some congestion about the liver, I gave him calom. gr. j. nocte et mane. In a month he became perfectly well.

*Remarks.* — This case is another proof of the bad effects of astringent injections, in producing general contraction, and irritability of the urethra, independently of stricture. The difficulty in making water was here equally great as if stricture had really existed, and all the sensations which are produced by this affection, as well as by stone, may be excited by a different cause. Conceiving this case to be, like the former, one of violent increased action, brought on



by a similar cause, the indication was clearly to remove irritation; and, considering that his habit of body admitted a free use of antiphlogistic remedies, I bled him at once to the extent of sixteen ounces; purged him briskly, as in the former case; applied fomentations to the perinæum and region of the bladder; and made him sit over the steam of warm water, so as to remove the tension from these parts. These means were assisted by the injection of glysters up the rectum, composed of gruel and oil. The effect of this treatment was a considerable alleviation of the symptoms; in the course of eight days the stream of urine became much increased, though its secretion was small, and some degree of tension still continued in the perinæum. To relieve these symptoms, I thought it necessary to determine to the skin; and for this purpose, gave him the emetic tartar in nauseating doses; but, as he could not be prevailed on to lie in bed, the medicine, instead of affecting the skin, immediately acted on the kid-

neys, and produced a copious secretion of urine. Having thus far gained on his complaints, and observing from the appearance of the skin that some accumulation was present in the liver, which I conceived might keep up irritation and retard the cure, he was put upon a course of calomel, for the space of a month, at the expiration of which he was completely cured.

#### CASE XV.

A gentleman complained of great tenderness in perinæo, when he rode on horseback, producing a sense of weight and a degree of slowness in voiding urine, which was passed in very small quantities, and at distant intervals; so that he could suffer twelve hours to elapse without voiding it, and even then, the water rather dribbled, than discharged itself in a stream. With these symptoms there was a sensation of pain apparently about the membranous part

of the urethra, of a cutting kind. He first applied to a surgeon, who introduced a bougie; as he told him that unless this were done, a total suppression of urine would ensue. This instrument he passed three times a week, and continued to do so for the space of half a year. The patient was of a very delicate and irritable habit of body, with much yellowness of the skin, having for a long time resided in warm climates. He had experienced, however, no relief from the above treatment, but on the contrary was afflicted with a severe lancinating pain, on its entering the membranous part of the urethra, which even extended towards the bladder. From the combination of symptoms he complained of, I had some suspicion of the presence of a diseased prostate; I therefore introduced my finger up the rectum, and found much tenderness of the gland, but neither enlargement nor hardness. Conceiving his general health to be the chief object of attention, I requested him to wear flannel

next his skin, and to sit over the steam of warm water night and morning. In addition to this, he also rubbed into the perinæum the lin. ammon.  $\text{cm}$ . antim. tart. which brought out a copious eruption; and took every night 5 grains of the pil. hydrar. with a small quantity of antim. tart.; and in the morning, a moderate dose of the ol. ricin. By this plan of treatment, the symptoms gradually subsided; and he then took the pulv. sarsap  $\text{cm}$ . cinchon. equal parts, twice a day. In about three months he perfectly recovered his health and spirits.

*Remarks.*—This is another instance of the consequence of severe exercise, particularly riding on horseback, in aggravating all affections of the urethra. It is evident, no stricture existed in this case, and that the symptoms were entirely produced by that irritable state of the urethra connected with the prostate gland, which has been so accurately described by Mr. Abernethy. The use of



the bougie here, instead of relieving the symptoms, served only to aggravate them, and it is surprising that the surgeon, to whom the patient first applied, should have continued the use of this instrument, when he must have been sensible on passing it, that no stricture really existed. The plan which appeared to me the most clearly indicated, was in the first instance to attend to his general health. From having been long resident in a warm climate, I conceived it of great moment to keep the skin moist; and therefore ordered him to wear flannel. After opening his bowels; and applying such local means to the perinæum, as might tend to lessen the irritability of the urethra, I put him upon an alterative course of mercury; conjoining this with a small proportion of antim. tart. a combination which I have invariably found prove highly beneficial. The symptoms being subdued by these means, the cure was completed by the use of bark with sarsaparilla; so that

in the space of three month, she became perfectly well, without the least necessity for the application of a bougie, or any other means to the urethra itself.

## CASE XVI.

A gentleman, aged 24, applied to me, in March, 1809, for a gleet, which had existed for two years, and for which he had employed various remedies. Cautic bougies had been repeatedly introduced ; but, in consequence of almost a total suppression of urine, which had taken place about a month before, he would not admit of their further introduction, he said, that he had not been at all benefited by their use, but, on the contrary, had been rendered rather worse. He experienced, at this time, considerable pain in making water, which was voided in four streams, as if proceeding from the spout of a water pot. He ejected it, however, with but little straining, to some distance, though not

so far as usual. He immediately requested me to introduce an instrument, to ascertain the state of the stricture, a request I declined complying with, as he had much tenderness in both testicles. He was also of a full habit of body, and lived freely. I immediately bled him rather considerably from the arm; purged him briskly, and desired him to lie in bed for two days, which he did. In consequence of this, the irritability of the urethra subsided, and likewise the tenderness of the testicles. I now endeavoured to pass down the urethra a moderately sized bougie, for a short distance, which he could not endure more than a minute. The next day, this trial was repeated; but still it could not be retained, as it brought on great inclination to void the urine. I now gave him an opiate every night, and a dose of Ol. Ricin. in the morning. Four days after, I again tried the same bougie, which continued in the urethra for the space of two minutes, without producing the least uneasiness; but it was passed only a very

short way down the canal. The next day it was borne a little further down, for the space of four minutes. On the following day, I penetrated to what I supposed to be the seat of the stricture, as the bougie struck against a firm resistance. This part, however, was so sensible, that I was, almost immediately, obliged to withdraw the bougie. This plan was continued for a week; varying the time of keeping in the bougie, according to the feelings of the patient. It seemed to gain a little; and at the expiration of a fortnight, from the continual pressure of the instrument, it penetrated through the stricture. In five weeks longer, by introducing it three times a week, the patient got completely well.

*Remarks*—This is another proof of the frequency of gleet, as a symptom of stricture; and it offers also another confirmation of the objections we made to the use of caustic as a remedy in this disease. The existence of stricture here



was very evident, even by his manner of making water, and from the stream being divided in so singular a manner. The patient's uneasiness made him anxious, on applying to me, that I should immediately pass an instrument ; but conceiving here, as in the preceding cases, that the state of the parts was unfavourable to such examination, I declined it, in order to pursue a general plan of antiphlogistic treatment, by copious bleeding, brisk purging, and confinement to bed, in consequence of which, the local symptoms of irritation, both in the urethra and testicles, soon subsided. I then complied with his request, by passing a moderately sized bougie a short distance down the urethra ; but this he was unable for a minute to endure. This attempt was repeated, and with the same result, on the following day, and brought on a strong inclination to void urine. In this irritable state, I found it necessary to suspend my efforts, and to have recourse to opiates regularly continued, with attention to the state of the bowels. In

the course of four days, the irritability of the urethra was so much lessened by this plan; that the bougie could be retained in the passage, first, for two minutes at a time, and afterwards for four minutes; gradually passing every day further down, till it arrived at the stricture, which gave considerable resistance. Here I was obliged to resort to the plan I have uniformly recommended, of keeping up a regular pressure upon the stricture, till progress be made. By this mode, in the space of a fortnight, I was enabled to penetrate through the stricture; and in five weeks more, by the continued application of the instrument three times a week, to complete a cure. This case must satisfy the mind of every practitioner, that the gradual introduction of the bougie, and the giving of it no more action at once than can be admitted by the feelings of the patient, is, in every respect, a much better plan than the employment of forcible means; which, should they be successful, always produce effects equally

disagreeable with the disease itself, and often of long duration.

## CASE XVII.

An old gentleman put himself under my care, in May last, for a supposed stricture, under which, he conceived, he had laboured for some years. He had applied to various practitioners, some of whom had passed the common, others the caustic bougie; each of which not only failed in producing relief, but aggravated all his symptoms. About a fortnight previous to his applying to me, the liquid caustic was used, on Mr. Whately's principle, which excited much inflammation and pain. When I saw him, he had a continual inclination to make water, which he voided in very small quantities, not more than a table-spoonful at a time. I applied some leeches to the perinæum, put him into the warm bath, and gave him an oleaginous enema with some tinct. opii. On the following morning, he was briskly

purged by means of the Ol. Ricin.: so that, by the following evening, the violence of his pain considerably abated, and his frequency in making water became lessened. The opiate enema and ol. ricin., together with sitting over the steam of warm water frequently in the day, and a saline draught, with vin. ant. tart., was administered every evening. This plan was continued for a week, when all the inflammatory symptoms subsided, and the pain and inclination to make water became greatly diminished. In compliance with the wishes of the patient, but contrary to my own ideas, I now introduced a bougie, which, when it reached the membranous part of the urethra, though I found no obstruction, still gave him extreme pain. Meeting, however, with no resistance, I carried it on, in a very gentle manner; still, the pain was so intolerable, that when it arrived behind the symphysis pubis, I thought proper to withdraw it. Having every reason to suspect a diseased prostate, I next introduced my finger



up the rectum, when the gland felt larger than natural, though not so much so as I should have expected, the pressure on it, from the rectum, caused much pain; leeches were occasionally applied, and the ung. nyor. mit: with camphor, rubbed into the perinæum; the other remedies above mentioned were also continued; and, in the course of three weeks, he made water nearly as well as ever he had done in his life.

*Remarks.*—This case is an additional confirmation of what we have frequently had occasion to condemn, viz. the anxiety, manifested by surgeons, for the introduction of instruments, when the parts are incapable of admitting them, from their state of extreme irritation. Deviating entirely from this plan, the circumstances of the case formed the leading indication, and instead of having recourse to local means, I employed the general antiphlogistic treatment, directed especially to subdue the local inflammation, as a necessary prelude to any

plan which might afterwards be found requisite. The effect of this was a total relief of the symptoms; I was therefore convinced, that no stricture had ever existed, and that the whole of the symptoms depended on an inflamed prostate; an opinion which was confirmed on my passing a bougie, which gave intolerable pain at the seat of this gland; as was also produced by examination per anum, when the prostate was pressed, and found also somewhat enlarged. The establishment of the proof of a diseased prostate producing all the symptoms of stricture, is justly due to Mr. Abernethy; but, though he has ascertained the circumstance, he has not followed it up by a detail of cases, and therefore could not impress it sufficiently on the minds of practitioners, nor fully shew the effect of the usual antiphlogistic means, when skilfully directed, in removing all the painful symptoms which attend this morbid state of the passage.

## CASE XVIII.

A gentleman put himself under my care, in April last, for stricture. He had no pain in making water, nor any great increase in its frequency ; but he complained that he was obliged to employ violent straining, every time he attempted to void it. He attributed the commencement of his complaint to cold, and to drinking hard while affected with gonorrhœa : after the inflammatory symptoms of the complaint had subsided, he first found, that his stream of urine became twisted. A medical gentleman, to whom he applied, endeavoured to pass a bougie ; but, after some fruitless efforts, he was obliged to desist, however, he made the attempt with a very small one, which he succeeded in passing into the bladder, but it produced extreme soreness through the whole extent of the canal. From what he had suffered, he would not permit his medical attendant

to continue his attempts, but lived low for some time, and took salts occasionally. In the course of two months more, the symptoms were so much increased, that he became unable to pass his urine without the greatest labour, and much pain, so that he was nearly a quarter of an hour in emptying his bladder. In this state, after opening his bowels, and after putting him into the warm bath, I passed a bougie of a moderate size. Finding very little sensibility in the canal, I kept it there for the space of ten minutes, making pressure on the obstruction. I, next day, increased my pressure to a quarter of an hour; and on the following one, for twenty minutes; and for the space of half an hour, on three successive days. But gaining no ground by this mode, and the urethra being very insensible, I endeavoured to pass a gum elastic bougie, to find the opening of the stricture; but, making no progress with this instrument, I next day introduced the caustic, and kept it for two minutes at the strictured part.



A little blood followed its introduction, with a trifling sensation of burning pain. On the following day, I passed a moderately sized catheter, and kept the parts on the stretch. I applied the caustic and catheter eight times, alternately; when, with a little pressure, the latter instrument passed through the stricture. In consequence of this, about four ounces of blood were lost; the catheter was introduced into the bladder in the evenings for about four hours; and the patient was completely cured, in a fortnight, after passing the stricture.

*Remarks.*—This case shews the danger which attends the neglect, or improper management of gonorrhœa. The patient dated the symptoms of stricture, immediately subsequent to the termination of the inflammatory stage of his former complaint. On his application to a practitioner, a bougie of very small size was passed, with difficulty, into the bladder, but attended with so much pain, that the patient would not allow the at-

tempt to be repeated; this was not merely confined to the seat of the stricture, but extended through the whole canal. After this, the patient preferred pursuing his own method by endeavouring to alleviate the symptoms by mild antiphlogistic means, and particularly by attention to the state of his bowels. The disease, however, continued to proceed for two months longer, when he made application to me. Having endeavoured to lessen the irritation of parts for a day or two, I attempted to pass a moderately sized bougie to the seat of the obstruction, and continued my pressure upon it for at least ten minutes. This was repeated for a quarter of an hour on the following day, and the period progressively extended for three days longer. The urethra, during this time, betraying very slight signs of sensibility, it enabled me to make my pressure more powerful, and to continue it, for some time, at each application. However, with these advantages, I made but little progress, and, therefore, intro-

duced an elastic gum bougie, to penetrate the aperture of the stricture ; but I failed with this instrument, and resolved, in consequence, to employ the caustic ; and by means of this, alternated with the regular use of the catheter, I succeeded in effecting a cure. This case was evidently favourable to the use of the caustic, from the insensibility of the passage ; hence, it excited little pain in its application, which is rarely the case where this remedy is employed ; this insensibility was further proved, when the patient was afterwards enabled to retain the catheter for four hours at a time ; but, even in so favourable a case, the application of the caustic was attended with considerable hemorrhage ; and, though I allow, that it becomes, under certain circumstances, a necessary remedy, yet this case forms no exception to my former objection to its indiscriminate application, and the mischievous consequences which it must produce, when applied to an irritable and inflamed surface,

## CASE XIX.

A married gentleman applied to me, some time since, for what he conceived to be gonorrhœa, from his having a discharge from the urethra, and having had a suspicious connection a fortnight before. He voided his urine with extreme labour, and had a frequent inclination to discharge it, but could not pass more than a table-spoonful each time. His bowels being constipated, I first endeavoured to open them by means of the *Ol. Ricin.*; but this exciting nausea, I was obliged to substitute some other remedy. I therefore gave him a powder of calomel and rhubarb at bed time; and on the following morning, a dose of *magn. vitriol. in infus. rosæ*. This produced several copious fluid evacuations, and while under the influence of this discharge, there was a considerable cessation of symptoms. The next day, I merely gave him mucilaginous drinks,



but these produced no effect, and his pains became more intolerable. I now put him into the warm bath, gave him an opiate glyster with oil, and a dose of pulv. dover. at bed time. This caused a cessation of the symptoms during the night, but they returned by 11 o'clock the following morning. I now gave him another dose of magn. vitriol. which produced only two tolerably copious evacuations. He again became easy while under the influence of the laxative; in the evening, he took the dover's powder and passed a tolerable night, but on the following morning the symptoms recurred with the same violence as before. Finding opiates to have merely a temporary effect, I was induced to try the cicuta, as I thought this a good opportunity of ascertaining the effects of this medicine in cases of irritable bladder, conjoining it with the use of the warm bath and leeches; but notwithstanding, I continued it for the space of five days, even to such an extent, as to affect the head, it caused no mitigation of the

symptoms. I now gave him large quantities of the aq. kali. puri. joined with the uva ursi. as well as mucilaginous drinks during the day, and opiates at night. He had not taken these medicines more than four days, before his inclination to make water, became less frequent, and his pains much diminished. In two days more, the opiate was omitted at night; his complaints became gradually lessened, small portions of calculi passed with the urine, and, in a week more, he was completely cured, nor has he since suffered any relapse.

*Remarks.*—This case strongly shews the influence of gonorrhœa, as an exciting cause of other affections of the urethra and bladder. The patient had no uneasy symptoms for a fortnight after his suspicious connection. The symptoms evidently indicated the antiphlogistic plan, particularly by freely opening the bowels; and during the operation of medicines for this purpose, a relief of the symptoms was expe-

rienced, but they recurred with the same violence on the cessation of this. As the substitution of mucilaginous drinks had no influence in this respect, it is clear that purging, by lessening the secretion of urine, and thereby rendering the action of the bladder less frequent, had alone the effect of affording momentary relief; for though opiates produced temporary ease, it was not so complete as that produced by purging, nor did it remain longer than during the continuance of their narcotic influence. The repetition of purging seemed uniformly to produce the same beneficial effect. Conceiving this to be a case of irritability of the bladder, on whatever cause that irritation might depend, I resolved to try the powers of cicuta, so much boasted of in this respect, by exhibiting it in a very liberal manner, but I found it fail in producing any mitigation of symptoms. Conceiving further, that this irritation might be connected with a calculous disposition, I resolved, by another mode of treatment,

to determine this point; and, accordingly ordered him the aq. kali puri, joined with mucilaginous drinks, and the uva ursi. In the space of four days, this plan greatly relieved all the symptoms; and, in the progress of the cure, portions of calculi were passed, which denoted the irritating cause, and that all the symptoms which attend stricture may be derived from a variety of other sources. This case shews the propriety of caution on the part of the practitioner, in any opinion he may give, as to the existence of stricture; and that, in all cases of this complaint, the medical treatment is as essential as the surgical, so that by attending to the former in the first instance, the latter may be superseded in many cases, where permanent and deranged organization of the urethra does not exist. The cure, in this case, I attribute entirely to the aq. kali puri, which I conceive to have some specific operation on the mucous or secreting membrane of the bladder, which seems to obviate the disposition to the



formation of calculi. The attack of gonorrhœa was evidently here the exciting cause of the malady, and the bladder was rendered irritable on this account.

## CASE XX.

Mr. H——, between 50 and 60 years of age, had been the subject of stricture in the urethra for several years. He had applied to several practitioners, both in the county where he resided and in London, and various means had been from time to time recommended and employed, with little temporary, and no permanent relief. His constitution was much impaired, as well from debauchery of various kinds, as from the frequent attacks of quotidian intermittents, which this disease is well known to occasion. His professional avocations had induced fondness for study ; among others, he frequently read and conversed on medical and surgical subjects. When attacked with stricture, he attempted to make himself acquainted with the nature and modes of treatment of this complaint. Being however deficient in the fundamental parts of the profession, he failed (as must be



## TINEA CAPITIS.

THIS is a cutaneous disease, of common occurrence, affecting the scalp, the skin of which differs from that of other parts in being of a firmer texture, and the seat of more numerous hairs.

This disease produces small pustular eruptions at the roots of the hairs, which break either spontaneously, or are broken by combing or other modes of cleanliness. If from negligence, or from the inveteracy of the disease, it extends, the scalp then becomes more or less covered with scabs or blotches, which are thick, dry, and of a yellow, white, or greenish colour. On the removal of these scabs, the subjacent parts discharge a fœtid matter of a peculiar kind. The skin itself when cleaned, has a red and excoriated appearance.



This complaint, is at first circumscribed in its extent, and is usually confined to the scalp. In its progress, the adjacent parts, viz. the face, the neck, and upper part of the back, sometimes become affected. It more frequently occurs before the age of puberty, but adults are not exempt from it. Few diseases are more obstinate in yielding to remedies, or require a more active and attentive treatment than *Tinea Capitis*. It is also very liable to recur repeatedly, which proves a great inconvenience to the patient, and not unfrequently perplexes the practitioner.

I consider the disease divisible into two species, viz. the dry and the moist. The dry is the more obstinate, and is vulgarly called *ring worm*,\* in which the

\* The term ring worm, is applied to that species of the dry *Tinea*, in which the skin assumes an appearance, somewhat resembling that worm, but the wormlike appearance is frequently wanting in the dry species.

hair drops off in patches. It generally resists every means employed for its cure, but in some cases a temporary relief seems to be obtained. Three cases lately occurred, sent me by Mr. Astley Cooper, which yielded to the treatment employed, and were ultimately completely cured.

The moist form occurs more frequently, and generally engages most attention. In this species, the *Cutis Vera* is the seat of the disease; it seems to have its origin in the bulbs of the hairs,\* and from these, extends to the circumjacent cutis. Some cases which occurred in negro children, gave me an oppor-

\* By means of a microscope, the bulb of a hair is seen to consist of a double capsule, into the inner of which, the organic extremity of the hair, surrounded by a mucilaginous substance, is inserted. When this disease exists, the bulb is frequently enlarged; it then necessarily occupies more space than natural. May not this mechanical cause concur with the peculiar affection of the bulb, to extend the disease to the cutis?

tunity of remarking that the rete mucosum was not reproduced when the sores healed.

The existence of animalculæ, as supposed by professor Redi and others, has not yet been proved, and I am inclined to consider it an erroneous idea. The causes of this disease may be considered of two kinds; those which act generally, and seem to predispose to the disease, and those which act topically, and excite the complaint.

Of the first kind, seem to be scrophulous diathesis, poorness of living, and want of cleanliness.

Of the latter kind, filth and the matter itself which is produced from cases of Tinea. There is no doubt but the matter is capable of exciting the disease in others, and I believe that the complaint is most commonly occasioned by contagion. Whether it ever originates merely

from neglect and want, I have not been able to determine; since if the subject be of the higher classes of society, it may generally be traced to a source of contagion, and if of the lower orders, both causes seem to operate. There can, however, be no doubt, but that negligence, and inattention to the means of cleanliness, certainly aggravate the complaint. Such being the case, it is absolutely necessary in the treatment to attend to cleanliness, but I do not conceive that it should form the chief indication in the plan of cure, as has been often maintained.

The idea of this disease, which I wish to enforce, is, that it consists of a chronic inflammation productive of a secretion of matter peculiar in its nature, and capable of propagating the complaint if applied to the scalp of a healthy subject, as much so, as that of syphilis and other specific diseases. If applied to other parts of the body, it will also produce a si-



milar disease,\* allowing for the difference in the structure of the skin of those parts, and which is generally known under the name of ring worm. The lymphatic glands, in the vicinity of the affected part of the scalp, become swollen and painful, probably from the absorption of this matter.

Children of opposite constitutions are the subjects of Tinea. The first are those of delicate habits, who are not only predisposed to scrophula, but in whom the scrophulous action is present, and in these, the disease is much more difficult of cure. On examining such cases, the lymphatic and glandular systems will, very generally, be found deranged, and the mesenteric glands, as forming part of the former, are affected with chronic inflammation, producing indurations. In such habits, we shall find the cure of Tinea to be a secondary consideration. If we examine the surface of the skin, it

\* I have ascertained by several experiments, that the disease may be inoculated.

will be found universally dry, attended with a desquamation of the cuticle in various parts of the body, especially after exposure to cold. The eyelids are excoriated, and even frequently ulcerated. The scalp, partaking of the constitutional affection, assumes the appearances already described ; some part of it from the means employed may begin to mend, but in another, hitherto uncontaminated, the disease will occur, or a discharge may take place, from behind the ears. When the sores produced in other parts of the body by the contact of the matter get better, the head becomes worse, and *vice versa*. Under such constitutional circumstances of Tinea, it is evident, that we may as well attempt to heal a true scorbutic ulcer by topical applications, without attending to the morbid state of the animal economy. We must not, therefore, expect that Tinea, which exists in consequence of a morbid change in the system, should be cured by mere topical means.

The nature of the constitutional affection, deduced from the cases which have occurred to me, is as follows. Digestion is impaired; the aliment passes into the intestines in an unassimilated state; the chyle thence produced is deficient in quantity, and defective in quality; and its absorption (even were it healthy) would be greatly impeded by the quantity of mucus lining the internal surface of the alimentary canal. The muscular fibres of the intestines are weak, a great quantity of flatus is generated, which distends them, producing a degree of tympanitis. The liver, under these circumstances, endeavours to make up for the morbid changes in the other secretions, and therefore prepares bile of a much more acrid quality than in a state of health. This state of the bile, seems essential to the activity of the intestines, and though we cannot prove it by any fact, there can be little doubt, that there is also a change in the quality of the pancreatic juice. We cannot therefore be

surprized at the irregular state of the bowels of such subjects, being sometimes constipated, and at others subject to diarrhœa ; nor at the existence of different kinds of worms, which must be the consequence of such a deranged state of the alimentary canal. As to the absorbent system, we shall find, in all those habits where the sanguiferous is weak, the lymphatics partake of the same state ; we must therefore expect that the lacteals, if they possess muscular action, which there is every reason to suppose they do, will lose their power, consequently their disposition to absorb. In such a deranged state of system, the skin (as an extensive glandular apparatus), has its secretion much diminished, as well as morbidly changed. The sebaceous glands also, in particular parts of the body, especially about the head, ears, and eyelids, which nature seems to have destined to secrete a mild oleaginous fluid, now produce one of a most



acid quality. The absorbents probably becoming irritated by this fluid, endeavour to remove it, and in so doing, produce ulceration of the surrounding parts.

From this view, the following indications of cure seemed to be most reasonable, and subsequent experience has confirmed the opinions I had previously entertained on the subject. The state of the stomach seems to point out the necessity of an emetic. The intestines should then be stimulated by drastic purges; that which I prefer is a combination of calomel, rhubarb, and emetic tartar, given about twice a week, and in the intermediate days the infus. gentian. c<sup>m</sup>. aq. kali ppt. warmed by an aromatic, which will tend to restore the tone of the organs, and to neutralize the acidity. At the same time, an ointment composed of ung. hydr. mit.  $\frac{3}{4}$  ij. camphor  $\frac{3}{4}$  ij. and cerat. spermat.  $\frac{3}{4}$  ij. should be occasionally rubbed into the region of the abdomen. This I do with a view

to assist in producing some degree of increased action in the abdominal viscera, as well as to favour absorption, but I depend much more on the friction than on the application itself. This general plan of treatment is to be conjoined with topical applications. I first direct the head to be shaved, and made very clean by washing it with soft soap and warm water. I then direct the ointment formula, No. 1, to be warmed, and well rubbed into the scalp, by means of a brush, night and morning. As soon as the state of the stomach and bowels has been improved by the means recommended, I have recourse to the use of steel, the best preparation of which is the tinct. ferr. ammon. in small doses during the day; also if circumstances permit, and the season is favourable, I advise such patients to be sent to the sea-side. These means are recommended with a view to restore health. But I must observe, that with respect to external applications, very different effects seem to be produced by

them in apparently similar constitutions: Where the head is particularly tender, I frequently begin with the aq. calcis, containing a solution of opium, or a very diluted solution of cerussa acetata; but in other cases, I find that the most stimulating kind of applications do best; as weak solutions of lunar caustic, corrosive sublimate, tinct. canthar., Fowler's preparation of arsenic diluted; in others, solutions of metallic oxides are more beneficial, as a solution of verdgris with aq. kali., one of sublimate in aq. calcis, &c. in a word, no specific remedy will apply here, but the formulæ enumerated must be regulated in their selection by the existing circumstances of the case, which will be found to be continually varying.

Such is my practice in the first class of patients subject to Tinea Capitis, where a general debility of the system forms the prominent cause of the disease, and where the indications require to be re-

gulated by keeping this leading circumstance in view.

I am now about to state a different morbid condition of scrophulous subjects labouring under Tinea. In these the predisposition to scrophula is strongly marked, though the disease does not actually exist at the time. The glandular secretions, excepting that of the skin, are healthy, but in such cases the disease is owing to irregularity in diet and exercise; the children of the rich are pampered, while those of the poor are at times scantily supplied with wholesome food, at others overloaded with substances which tend rather to alleviate hunger than to afford nutriment. This concurrence of circumstances will produce the following effects on the animal economy. The stomach and alimentary canal, in either case, are oppressed, the lacteals become torpid, chronic inflammation of the mesenteric glands will ensue, but the chyle though imperfectly prepared, is carried into the circulation in sufficient quantity to sup-



ply the system. In such subjects the thorax being capacious, and the lungs in a healthy state, the chyle is quickly converted into blood. The want of proper air and exercise concurring with this state of the chylopoietic organs, must occasion accumulation of their contents, and will tend to produce torpor or indirect debility. The circulation partaking of this state will cause a diminution of insensible perspiration; plethora will ensue; and nature, in order to obviate this fulness, will occasionally make strong efforts, either by producing small and frequent evacuations *per anum*, (considered by nurses as a purging), epistaxis, and not unfrequently hydrocephalus; cutaneous eruptions will appear in various parts of the body, and among others, the head becomes affected with Tinea. Whoever therefore expects to cure this apparently local disease in such a subject, will be foiled in his attempts; I would therefore consider the complaint rather as an effect than a cause. In such a case, I begin my plan of cure by

attending to the constitutional symptoms, and instead of administering tonics in any form, my chief object is to attend to the state of the alimentary canal and skin. With this view I have found calomel, united with tartar emetic (as an alterative), given every night at bed-time, of service ; and also a full dose of calomel, scammony, and jalap, administered two or three times in the week, so as to excite brisk purging, equally necessary ; as well as putting the child occasionally into the warm bath, or warm sea-bath can it be procured. With this treatment may be conjoined frictions to the abdomen, and when sufficient attention has been paid to the system, in order to restore it as nearly as possible to the standard of health, I then attend to the local complaint, employing the same applications as in the other forms of the disease, varying them according to circumstances.

### CASE I.

Charles Courtney, aged three years,

of a strumous habit of body, having the glands of his neck enlarged, with tension of the abdomen, but rather of a plethoric constitution, was brought by his mother to the Eastern Dispensary, in October 1808, for Tinea, which extended over the head, face, and part of the neck; and the whole of the scalp was incrustated with a hard dry scab. The complaint had been gradually coming on for rather more than two-and-twenty months, having commenced with an eruption behind the ears. The patient had been first taken to several dispensaries, and then to an hospital; at these institutions it continued under treatment for eleven months, but without deriving any obvious benefit. On first seeing him, I directed the head to be closely shaved, and the ointment formula, No. 1, to be well rubbed into it night and morning with a brush. He was briskly purged twice a week by means of calomel, rhubarb, and jalap. The abdomen was rubbed every morning with the ung. hydr. mit. cm. camphor: and with a view of determining to

the skin, he took a powder, composed of calomel and antim. tart. every night. In three weeks, signs of amendment began to appear. This plan of treatment was continued for a month longer, when the head and face were both considerably better, the scurfs having begun to separate. I then ordered him a weak solution of sublimate, which was continued with the ointment till the latter end of November, when a cure was effected. I saw the child a few days since, and find that he has had no relapse of the complaint.\*

## CASE II.

John Duncan, aged fifteen years, was recommended to the Eastern Dispensary, in November 1808, for Tinea, with which he had been affected fourteen months.

\* My worthy colleague, Dr. Haighton, saw the patient with me when first brought to the Dispensary, and also at my request inspected the head at different periods during the cure.



The disease in this case evidently depended on contagion, he having repeatedly slept with a child who was the subject of the complaint. His health had been previously good, nor had it suffered during the existence of the complaint. He had applied to several public institutions for three or four months, but without receiving the least benefit. I directed his head to be shaved, and the ointment formula, No. 1, to be applied night and morning; becoming debilitated, he took the ferr. præcip. three times a day. In about a fortnight, signs of amendment were perceptible. He then took, as an alternative, a solution of sublimate in spirit of wine, and instead of the above ointment, a lotion of sublimate was applied to the head in the day, and the ointment formula, No. 2, at night. By the latter end of May following, he was completely cured.\*

\* In this case various applications were made to the head.

## CASE III.

Elizabeth Gill, aged four years, of a scrophulous habit, was recommended to the Dispensary, in January last, for Tinea. The complaint had been coming on for two months, and she had been under the care of an eminent hospital surgeon, but obtained no relief. I directed the head to be shaved, and the ointment to be applied night and morning, formula, No. 1. She was purged by occasional doses of calomel and rhubarb, and the general strength supported by the exhibition of the tinct. ferr. ammon. By pursuing this plan of treatment, and keeping the head perfectly clean, in the course of ten days it began to mend, the scurfs separating; and the general health was somewhat improved. This plan was regularly continued for three weeks longer, at the expiration of which the child became perfectly well.

## CASE IV.

Elizabeth Cruttenden, aged five years, became a patient of the Dispensary under my care, in December last, for Tinea. The complaint had been coming on in a gradual manner for five or six months, and was supposed by the mother to have been caught of a young person afflicted with the same disease, who resided with her. The tar ointment, and various other applications, had been resorted to for its cure, but all of which had proved ineffectual. I directed the head to be closely shaved, and the ointment, formula No. 4, to be rubbed in night and morning. The bowels were kept open by a powder of calomel and rhubarb, given twice a week, and a determination to the skin preserved by antimonials. In a week, the head was much better, the separation of the scales having begun to take place after two appli-

cations of the ointment. I then put the child upon a course of steel medicine, with a view of invigorating the constitution, and in six weeks she got completely well.

## CASE V.

Elizabeth Hoder, a child, seven years of age, was sent to me, in May last, for Tinea, which had been coming on two months. The hair had fallen off in patches, leaving behind a briny scurf on the skin, but no appearance of scab. The child was of a very delicate constitution, with symptoms of scrophula actually existing; the glands of the neck being enlarged, the tarsi of the eyes red, and the abdomen very hard. On purging her, several worms came away. The disease in this case could not be traced to contagion, but first broke out about the ears. I directed the head to be shaved, and the solutio hydr. mur. No. 17, to be applied in the day time, and the ointment, formula No. 2, to be



well rubbed in at night. The child was purged by occasional doses of calomel and rhubarb. The tinct. ferr. ammon. was also given. By the middle of June the child was completely cured.

## CASE VI.

David Hoder, nine years of age, brother of the last patient, was sent to me at the same time, nearly under similar circumstances of Tinea, which had been coming on five months. A modification of the same means were employed, and with the same success.\*

## CASE VII.

Mary Solomon, aged thirteen years, of a full habit of body, was sent to me

\* These patients were recommended to me by Mr. Astley Cooper, and who saw them again when cured. I must confess I had little idea of curing these two cases.

last June for Tinea. This was an instance of the moist species, and had been coming on since she was two years old. The head was directed to be shaved, and the ointment, formula No. 1, to be well rubbed into the head every morning by means of a brush, and at night the ointment, formula No. 3, was used with a view of softening the scabs. She was briskly purged by a powder of calomel and rhubarb, taken twice a week. In about a fortnight, the state of the head was much amended. I then gave her, night and morning, a solution of sublimate. In the course of five weeks, she got well,

### CASE VIII.

David Solomon, eleven years of age, of a similar constitution, brother to the former patient, was sent to me at the same time for Tinea, which extended over the head, and also over part of the

neck. The form of the disease, however, materially differed from that of the former case, being more of the dry species. This boy had previously been under the care of an eminent surgeon for some time, but had derived no relief from the remedies which were employed. I pursued nearly the same treatment as in the preceding case, and he was cured about the same time.

### CASE IX.

Samuel Dudley, aged ten years, of a scrophulous habit of body, was sent to me, in July 1808, for Tinea, which was of the scaly kind. The disease had existed for four months, and could be evidently traced to contagion. The parents had previously applied to various medical practitioners, but without deriving the least benefit. I ordered the head to be closely shaved, the ointment, formula No. 1, to be well rubbed into the head

every morning, and that of formula, No. 5, to be applied in the same manner at night. The bowels being in a torpid state, were stimulated by doses of calomel and rhubarb, given twice a week, and a determination was preserved to the skin by means of the vin. antim. tart. After some time, having got the bowels into a regular state, I proceeded to the amendment of the general constitution by the use of tonics, and, for this purpose, gave him small doses of the tinct. ferr. ammon. In about a month the head was visibly better, and the general health somewhat recruited. By a regular perseverance in this treatment for two months longer, the child became cured. It is now nine months since, and he has not suffered the least relapse of the complaint.\*

\* Two other children, of the same family, were sent to me, at the same time with this child, by Mr. Astley Cooper, afflicted with the same species of the complaint, it having been communicated by their



## CASE X.

William Ritchie, five years of age, of a scrophulous habit, became a patient of the Eastern Dispensary under my care, in May last, for Tinea. The complaint had been coming on for five months before, and was caught at a school where numerous children were infected with it, and in whom it had been allowed to proceed unmolested. The head was first shaved, and the ointment formula, No. 5, well rubbed into the part every morning by means of a brush. The child was occasionally purged by doses of calomel and rhubarb, and a determination to the skin maintained by antimonials. After a time, tonics were exhibited, as the tinct. ferr.

sleeping together ; one aged eight years, in whom the complaint had been coming on three months ; and the other five years of age, where it had existed about the same time ; both of whom got completely well.

ammon. with a view of supporting the general system. The head appeared better in the space of a month. Soon after the child was sent into the country, it having become debilitated by confinement in town ; where the same means were continued. In July he returned home, and in a few weeks afterwards became perfectly cured, nor has any relapse been since experienced,

The preceding cases of Tinea I have selected from a great number, and from public practice, with the name of each patient, that any professional man might have an opportunity of inquiring into the particulars relating to each case, as many of them were dismissed as incurable from various Hospitals and Dispensaries in the metropolis. It therefore seems to be useless to augment their number, as the general plan of treatment is so analogous. I have studiously avoided mentioning any private cases, as a reference to them would be indelicate. I have annexed formulæ of re-

medies which I have found to be successful in the cure of Tinea. I have no farther observations to offer, nor any favourite theory to advance, as to the pathology of the disease, my sole object being to present to the public a registry of facts.

*Formulae.*

No. 1.] R. Ung. sulph.

——- picis

——-Hydr. nitrat. p. æq.

Ol. Amygd. q. s. ft. Ung.

No. 2.] R. Adipis suillæ

Porr. commin. āā. ʒ iv. misce dein  
simul liquefactos cola et adde gum.  
camph. ʒij.

No. 3.] R. Ung. saturn.

——-Porr. camph. āā ʒ

No. 4.] R. Ung. hydr. nitrat. ʒss.

Hydr. mur. gr. vj.

Ung. porr. camph. ʒiij.

M. ft. ung.

No. 5.] R. Sal. ammon. crud. ʒss.

Ung. porr. camph. ʒij.

——-Hydr. nitrat. ʒiij.

M. ft. ung.

No. 6 ] R. Sub. acet. cupr. ʒj.

Ung. hydr. nitr. ʒj.

Axung. porcin. ʒj.

M. ft. ung.



No. 7.] R. Sulph. potass. ʒij.  
Tinct. canthar. j.  
Aq. puræ ℥bj. ft. lotio.

No. 8.] R. Ammon. ppt. ʒss.  
Aq. puræ ℥ij. ft. lotio.

No. 9.] R. Hydr. mur. gr. xij.  
Aq. puræ ℥ij. ft. lotio.

No. 10.] R. Hydr. mur. gr. xv.  
Aq. calcis, ℥bj. ft. lotio.

No. 11.] R. Sub. acet. cupr. ʒj.  
Aq. calcis ℥bj. ft. lotio.

No. 12. R. Zinc. vitriol. ʒj.  
Aq. calcis ℥bj. ft. lotio.

No. 13.] R. Ferr. vitriol. ʒj.  
Aq. calcis ℥bj. ft. lotio.

No. 14.] R. Sol. kali arsenic. ʒij.  
Aq. puræ ℥ij. ft. lotio.

No. 15.] R. Argent. nitrat. gr. x.  
Aq. puræ ℥ij. ft. lotio.

No. 16.] R. Argent. nitrat. ʒj.  
Aq. calcis ℥bj. ft. lotio.

No. 17.] R. Hydr. mur. gr. j.  
 Tinct. cardam c.  $\frac{3}{4}$  j. solve.  
 Capt. gtt. xx. bis in die ex aq. pur.

No. 18.] R. Tinct. ferr. ammon. gtt. xv.  
 Bis in die sumend.

No. 19.] R. Antim tart. gr. j.  
 Sacchar. alb. pulv. bene  $\varnothing$  j.  
 Calom. ppt. gr. x.  
 Cons. rosæ q. s. ft. pil. No. xvij.  
 Capt. j. o. nocte.

No. 20.] R. Pulv. rhæi gr. x.  
 Calom. ppt. gr. iij.  
 Antim. tart gr.  $\frac{1}{8}$  l.  
 M. ft. pulv.  
 p. r. n : sumend.

No. 21.] R. Calom ppt. gr. iv.  
 Antim. tart. gr.  $\frac{1}{8}$  l.  
 Pulv. jalap. gr. vj.  
 M. ft. pulv.  
 p. r. n : sumend.

*Fistula in Ano.*

I am induced to offer some observations on fistula in ano, from a conviction, that many surgeons have failed in curing the disease rather from neglecting constitutional means, than from an imperfect operation, or subsequent inattention to the mode of dressing the wound.

Fistula in ano is an abscess taking place in the cellular membrane, about the anus; and has been generally divided into simple and complicated. The first species is that in which matter becomes collected in the neighbourhood of the rectum and anus, and is discharged by one or more openings, having no communication with the gut. The complicated fistula, is so denominated, where the matter passes through the rectum in

consequence of ulceration, and is discharged either by the anus, or by external openings in its neighbourhood. In many cases, the gut is simply laid bare without erosion, nor is there any external opening.

In the treatment of this complaint, much attention should be paid in endeavouring to obviate its cause, as well as in the employment of local means, to induce a healthy disposition in the parts, without which a cure cannot be expected.

The first and most frequent cause of this complaint, is a scrophulous habit, and is often accompanied with a diseased state of the lungs. In such a constitution, any slight injury in the vicinity of the rectum, occasioning inflammation, will produce this affection, and whatever local means may be employed, will be totally ineffectual, unless the primary fault of the constitution be repaired. The determination to the skin in such



persons is less than natural; the consequence of which must be, that the vessels of the intestines, whether arteries or veins, will become more loaded with blood. The blood-vessels themselves are also of a more relaxed structure; hence they dilate considerably, and thus the circulation is rendered extremely languid, particularly in veins, where the blood acts against its own gravity. The consequence of this is, that the blood from the rectum, and its neighbourhood, is impeded in its return to the heart. The congestion thus produced, will occasion the surrounding cellular membrane to become laden with fluid, produced from the exhalent terminations of the arteries; while the veins, from their increased size, occasioning a mechanical pressure and irritation, will, as they enlarge, break down the cells of this membrane, and excite in it an erisypelatous inflammation; the matter then frequently points externally in the form of a tumour, or it is discharged with the stools. On introducing a probe, the

rectum is found denuded, or the sinus penetrates either into the nates or perinæum.

Another cause of this malady may be traced to an imperfect cure of syphilis, nor does it unfrequently proceed from the injudicious use of mercury in a scrophulous constitution. It is therefore of much importance to ascertain which has given rise to the disease; and to determine this, recourse must be had to the history of the case. When the cause is venereal, mercury must necessarily be employed, or the operation, conducted in the most skilful manner, will certainly disappoint the wishes of the surgeon.\* If, on the contrary, too much mercury has been given, the constitution will be so debilitated, as to render it necessary that tonic remedies, nutritious diet, and good air, should be recommended, pre-

\* I do not mean to convey, that mercury in such cases will avail without the operation.

vious to the performance of the operation.

A third cause of this affection may be traced to an erisypelatous disposition. In this case, the skin first appears of a dusky red or purplish colour, is harder than natural, but has not the tenseness of real phlegmonoid inflammation. This species is at first attended with a full and hard pulse, but if no relief be obtained, it soon becomes unequal, low, and faltering; and the strength and spirits are proportionally depressed. The matter which is formed is small in quantity, shewing a serous bloody appearance, and the cellular membrane, when examined, seems to be in a sloughy state. The subjects of this species of disease are in general addicted to habitual intemperance.

To these causes may be added, a diseased state of the liver, in consequence of excessive drinking, to trace the operation of which, it will be proper to ex-

plain the baneful effect of ardent spirits upon the system. The result of this practice is an altered action of the mucous membrane of the stomach producing a morbid change in the gastric juice. This fluid, in a healthy state, possesses neither an acid nor alkaline property; but when the mucous membrane becomes irritated from this cause, it then acquires a predominant acidity, as shewn by symptoms of dyspepsia. The change in this secretion, where the practice is continued, is frequently followed by a scirrhus state of the pylorus, in consequence of which, the nutriment is retarded in its passage into the intestinal canal. From the same cause, the mucous membrane of the intestines acquires a similar degree of increased action with that of the stomach, and its secretions are also poured out in a morbid state, producing that uncertain condition of the bowels observable in all persons addicted to such habits. From these effects on the stomach and bowels, we may trace a similar increase of action in the circula-



tion. A greater flow of blood will be determined to, and accumulated in, the region of the liver, by means of the vena portæ, which here performs the function of an artery, and when we consider this is made up of all the veins of the abdominal viscera, except the kidneys, we shall at once see, that if the secretion of bile is not proportioned to the quantity of blood which is sent to the liver, congestion must not only take place in that viscus, but also in the whole of the arterial and venous system, and when inflammation has exhausted itself, indurations of the liver will gradually take place, formed by a deposit of coagulable lymph; thus this morbid secretion of bile, much more acrid and stimulating than usual, will cause a continual excitement in the intestinal canal, which constant irritation, together with the laxity of the blood vessels in depending parts, as about the anus, will cause an inflammation and detachment of the cellular membrane, with a deposit in it. The absorbents then exerting themselves to take

up this effused fluid, ulceration is produced. In this case of diseased liver, the fistula is often preceded by, or attended with piles, which forms a kind of leading indication with respect to its cause.

Fistula in ano influences, in a considerable degree, the parts situated in its vicinity.

Having attended to the constitutional treatment of this disease, the local means may then be resorted to, the object of which is to promote granulations from the secreting surface of the fistula, as well as to obviate the accumulation and retention of the matter produced, by dividing the different sinuses throughout their whole extent.

There are two modes of accomplishing this object, either by incision or by ligature. The former is generally preferred, the latter, though employed by the French surgeons, has never been

much sanctioned in this country. The operation by incision is to be considered as giving an active stimulus to the parts, and promoting a disposition to heal, which, if seconded by constitutional remedies, so as to maintain a permanent vigour of the system, will enable the sore to heal with nearly the same facility as a common one. The cure by ligature seems to depend nearly upon the same principle.

Though we thus contend for the constitutional treatment, both as a prelude and an assistant to the local management, whatever plan may be adopted as to the latter; still there are some palliative means which should not be omitted. The chief inconvenience connected with the disease, depends on irritation and an irregular state of the bowels. To preserve in some degree their tone, aromatics have been advised, and Ward's paste has accordingly gained much celebrity for this purpose, and has been recommended with the use of an

injection, composed of the hydr. mur. c<sup>m</sup>. aq. calcis, as the most useful palliative means. From my own experience, however, I have not found this or astringent injections to be depended upon. In slight cases such methods may at first be tried, but if the patient can be persuaded to submit to an operation, it should never be too long deferred. To take off the irritation of the rectum, warm oily glysters should be thrown up, and retained as long as possible. But the above means, when used alone, are found to be entirely ineffectual, and where constitutional remedies are freely given, there is no necessity for a stimulus, as from the increased tone thus acquired, the parts will become sufficiently sensible to admit the process of healing, without its being further excited.

The success of the operation may be reduced to three points; 1. the complete division of the sphincter; 2. the free dilatation of the different sinuses; 3. the after dressing of the sore. On



the first point it may be observed, that a complete division of the sphincter muscle is necessary, even where the intestine is simply denuded; for without this no dependence can be placed on the cure, as each time that the patient goes to stool, the edges of the sinuses, from the action of the sphincter, will be pulled asunder, from which the same state will arise as that for which the operation was performed. A want of attention to this circumstance may be considered as the common cause of failure in this operation,\* and which the experience of every surgeon will confirm.

2. The operation is never to be considered as complete, unless all the sinuses are carefully divided and laid into one, Where this is omitted, the other steps of the operation may be performed in the most judicious manner, and yet prove unsuccessful; a want of healing still continuing in some of the sinuses,

\* Some operators have been fearful of dividing the sphincter, from an idea of destroying the power of retaining the fœces.

from the matter being so lodged as not to have a free outlet. 3. Next to this mode of performing the operation, a nicety in the manner of dressing the sore is particularly to be attended to, in order that the granulations may form in a regular and healthy manner. Thus it should be dressed very accurately from the bottom, so as to leave no opening by which new sinuses might form.

These are a few hints which I consider as necessary upon this formidable disease, which often proves so perplexing to surgeons. The operation itself is so well understood, that I can offer nothing new on the subject. My object is to inculcate the necessity of particular attention to the constitutional treatment. From this view of the disease it will appear how highly reprehensible is the conduct of those persons who trust to local treatment alone. This is the practice of most of the advertising empirics of the day, who, as well as being ignorant of anatomy, are afraid to operate, and trust the cure to the use of the

ligature, joined with some specific application or nostrum, flattering the patient with the hopes of a cure, in which however he is commonly deceived.

An abscess frequently forms in the neighbourhood of the anus or nates, and breaks externally without being connected with the gut; the matter flowing out at the most depending part. Sometimes, however, inflammation takes place here, forming an abscess, without its bursting, when it requires to be simply opened. This becomes after a short time a complete fistulous opening, and frequently has sinuses running outwards from it. In this case, having no connection with the gut, it would be absurd to think of performing the operation so as to divide the rectum. The cure will in such instances sometimes be effected by injection, and where the sinuses are few in number, the injection can easily be introduced into them.\* But in its use,

\* Even in such cases, however, the division of the sinuses by the knife is preferable.

much nicety and caution is requisite, in order to produce a cure. In the first place, the injection should possess only that degree of strength which will stimulate the parts in a proper manner, and excite sufficient inflammation to throw out a proper quantity of coagulable lymph to produce re-union. Together with the strength, the frequency with which the injection should be employed, is a point equally requiring attention. It should be used but seldom, for if it be too frequently introduced, the coagulable lymph, already deposited, will become washed away, too great a degree of inflammation be excited, and this increased irritation instead of producing coagulable lymph, will cause a deposit of pus. Various forms of injection have been recommended. Those which I have found most successful have been the following ; a solution of hydr. muriat. c<sup>o</sup>. aq. calcis, or a solution of nitrate of silver, a solution of white vitriol is also sometimes employed. A great point, requiring attention, is occasionally to vary



the form of these injections, so as to maintain the necessary stimulant effect, till the parts have become healed, for it is a principle in the animal economy that the effect of any one irritant applied to a part soon loses the power which it at first possessed, and therefore requires another to be substituted to produce the same effect. This is most evident in scrophulous sores, and as fistula in ano is more frequently of this species than of any other, the propriety of this practice will be obvious.

This local treatment however should not entirely be trusted to, but at the same time the system should be supported by a proper use of powerful tonics and nutritious diet.

In the cure of fistula in ano by ligature, which has already been noticed in a general manner, either a leaden wire, catgut, or silk may be used. To this mode, however, the objection before stated holds good, that the permanent

continuance of a foreign body must produce such constant irritation and irregular contraction of the bowel, that the chance of cure afforded by it is very precarious. It may, however, suit a timid operator or patient, who is fearful of the use of the knife; but the application of the ligature will be found in every respect more troublesome to the surgeon than the operation. There is much difficulty in penetrating through the sphincter muscle by the ulcerative process, which requires a length of time to take place; for every method of proceeding, which does not lay open to the bottom of the diseased parts, cannot be attended with success, and there is no method of effecting this but by the complete division of the sphincter. Besides, such a method must give much pain to the patient, from the repeated twisting of the ligature which is required.

Of the different modes of applying the ligature, perhaps the catgut deserves the preference, as being most easy of intro-

duction and most pliant in its texture. To a leaden wire many objections offer; and even the seton will prove difficult in its application, and during its continuance, will create a much greater discharge than the patient can support. This method is admissible in cases where the sinus is placed very high up in the the gut, and where, by the incision, there might be some danger of wounding the internal hæmorrhoidal vessels; and perhaps also in cases of extreme debility where any loss of blood would prove hurtful.

Upon the whole, then, the operation by incision is the most rational; provided proper precautions be taken to ensure its success, and which have been already pointed out. But in many cases the choice of the treatment is not left to the surgeon; the patient being timid will not submit to the idea of cutting, in consequence of which the surgeon is obliged to employ a mode of treatment

which shall coincide with the feelings of his patient, and enable him to attempt the performance of a cure, although he may not altogether approve of it.

### CASE I.

Captain Y——, about 44 years of age, who had resided three or four years in the West Indies, was brought to me, in June 1808, by a medical gentleman, on account of a complaint which was supposed to be piles. He felt extreme pain when at stool, and his shirt was occasionally stained by a quantity of matter. His countenance was yellow, his bowels were very irregular, sometimes relaxed, at other times constipated, and his strength was much impaired. On examining the part affected, I found three large indurated piles, and an orifice near the tuberosity of the ischium, from which much matter was discharged. I introduced a probe which entered a sinus, running towards the rectum. To ascer-



tain its relation to that intestine, I passed my finger *per anum*, and then readily felt the extremity of the probe close to the denuded gut; another sinus very deeply seated led towards the perinæum. His state being very unfit for the performance of any operation, I directed my attention to the improvement of his health, using no other local means than such as attended to alleviate the pain, occasioned by the piles and inflamed state of the parts in which the sinuses were situated. I directed occasional mild purgatives, but suspecting the state of his bowels to proceed from a disease of the hepatic system, I thought the guarded use of mercury would be serviceable. He rubbed in the ung. hydr. fort. till his gums were affected. He also took the decoct. sarsæ c<sup>m</sup>. cinchon. et soda ppt. An oily enema was occasionally injected at night, and an emollient cataplasm was applied to the fundament. This plan was steadily pursued for three weeks; he was then so much better, that I divided both the sinuses, taking care

to prevent the formation of partial adhesions, by attention in dressing the wound, which was completely healed in the course of a month from the performance of the operation.

## CASE II.

Mr. V——, aged 40, applied to me in May 1808, for the cure of a fistula in ano; from which he had suffered during the last five years. He was anxious to submit to the operation, the pain and discharge of matter having, for some time previous, much increased. Excessive drinking and other irregularities, concurred with the local complaints to induce a state approaching to hectic. I dissuaded him from having the operation performed till his health was in some degree re-established. With this view I sent him to the sea-side, where he remained two months, employing constitutional remedies, together with the sea-bath and salt-water poultice.

When he returned, his health was sufficiently restored to authorize the operation. In this case, one of the sinuses extended very far up the gut, and the communication between it and the rectum was of such size as readily to admit of the passage of a finger from one to the other. There were also six other sinuses, running in different directions. The wounds were dressed in the usual manner, but the healing process advancing very slowly, I wished him to return to the sea-side; being however unable to do this, the wounds remained unhealed for nearly four months after the operation.

### CASE III.

In June 1808, Captain S——, aged 50, put himself under my care, having a considerable discharge of matter from his fundament whenever he went to stool. This complaint had existed between two and three years, but was attended with no pain till within the last two

months, when it gave him much uneasiness, and caused great irritation about the fundament. He was constitutionally plethoric, but in very ill health, in consequence of long confinement in a French prison. He told me he had been treated by several medical men, both at home and abroad, for piles, but had received little or no benefit from what had been done. On examination, I found two sinuses; one beginning at that part of the nates covering the tuberosity of the ischium, which, after pursuing a very irregular course, terminated in the rectum high up. The other extended downwards nearly as far as the crus penis. On representing to him the nature of his case, he determined to have the operation immediately performed. I was therefore obliged to postpone general remedies till after the sinuses were divided, attending particularly to the state of his bowels, employing also occasionally glysters containing laudanum, and the warm bath, to obviate tenesmus. These local means, together with tonic me-



dicines and a nutritious diet, completed the cure in about six weeks.

#### CASE IV.

In January 1809, Mr. M——, aged 54, requested me particularly to examine the state of a fistula, under which he had laboured a considerable time, and which rendered him very uncomfortable, as he had been told there was some danger in curing him by an operation with the knife, as much hemorrhage was likely to ensue, from its being situated high up in the gut. The ligature was therefore proposed by the surgeon, to which however he refused to submit. On a careful examination of the sinuses, I found one running very high up by the side of the rectum, and the gut completely denuded, though not ulcerated; with several other smaller ones, extending downwards into the perinæum. His health being remarkably good, no constitutional remedies were required, further than keeping his bowels

in a regular state, and giving him occasionally an opiate. He perfectly recovered in a month after the operation.

## CASE V.

Mr. P——, aged 45, applied to me in August 1808, for a fistula of two years standing. He attributed its origin to frequent hard riding on horseback. A French surgeon, under whose care he was, previously to my seeing him, had promised to cure the complaint by means of injection. After a trial however of four months, he found himself worse, the pain and discharge having much increased. I found a small sinus running by the side of the rectum, which was denuded, and proposed to cure him by dividing it; but, being fearful of the knife, he would not consent. Under these circumstances, I employed a stimulating injection, which occasioned much irritation, but succeeded in accomplishing a cure, in the course of six weeks.

## CASE VI.

Mr. B——, aged 60, enjoying good health, probably from the temperate manner in which he lived, requested me, about 18 months since, to attend him for a fistula, which he said had long occasioned much pain while at stool, and that the evacuations were frequently followed by a discharge of matter. Being alarmed at the danger said to result from the use of the knife in such cases, he had recourse to an empiric, who, taking advantage of his fears, promised to effect a cure without either pain or trouble. Injections were thrown into the sinus, which excited excessive inflammation whenever employed. After a patient endurance of this rough treatment for several months, being convinced of the doctor's ignorance, he did not hesitate to dismiss him. This dread of the knife still remained when he applied to me; he therefore premised that neither inci-

sion nor injection, which he well knew to be severe, should be the mode of cure. Thus circumstanced, I passed a ligature of catgut from the orifice of the sinus through the rectum, and tightening it occasionally, the sinus was divided by the ulcerative process in about five weeks. This mode (as may be supposed) gave much pain, but succeeded in accomplishing a cure.

FINIS.



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